Evaluation Report of NIH K-12 Program

Title: Evaluation Report for the NIH6 Curriculum Supplement: *Doing Science: The Process of Scientific Inquiry*

Date: 2004

Description:
This report evaluates one component within the NIH K-12 program, the NIH Curriculum Supplements. The NIH Curriculum Supplements are K-12 teacher's guides to two weeks' of lessons that explore the science behind current health topics. The modules are sent free of charge upon request to educators across the United States. Over 50,000 educators have one or more curriculum supplement.

This study specifically examines the results of the field tests conducted during the development of:

Doing Science: The Process of Scientific Inquiry (Grades 7 – 8)

This study was designed to determine the effectiveness of the module as a supplementary addition in the K-12 science curriculum. The field test sites were selected from volunteers who were chosen to maximize inclusion of various races, ethnicities, and geographic regions. The evaluation consisted of a field test with close-to-complete instructional materials. The surveys measured student knowledge using a pre/post test. The teachers also commented on the effectiveness of the lessons and their implementation. These resulted were used to identify strengths that were highlighted and weaknesses that were corrected in the final draft. The teachers' comments were included in the final draft as "tips from teachers" on specific lessons.

Final Evaluation Report
for the

NIH6 Curriculum Supplement:
Doing Science: The Process of Scientific Inquiry

BSCS Evaluation Report (ER 2004-07 April)

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Executive Summary

BSCS developed a learning module on "Doing Science: The Process of Scientific Inquiry" funded by a contract from the National Institutes of Health. The evaluation study was designed to determine its effectiveness as supplementary material for middle school instructional materials. The field test sites were selected from volunteers who were chosen to maximize inclusion of different races, ethnicities, geographic regions, and urban-suburban-rural schools.

There were 10 primary and secondary sites in the study. The primary site teachers received a field test orientation at BSCS and an honorarium to be in the study. Secondary site teachers received no orientation, but were given a small honorarium upon completion of the materials and evaluation. There were 8 primary site teachers and 579 primary students in the study. There were 2 secondary site teachers and 162 secondary students in the study. The total number of students in the field test was 741. One primary school, Northeast Middle School did not participate in the field test, and no student or teacher materials were returned from that school. Missing materials (e.g., posttests) reduced the number (n) for some analyses.

The evaluation consisted of a field test with close-to-complete instructional materials. Students and teachers completed evaluation questionnaires after using the materials in February and March, 2004. Tables 6-9 are brief "Evaluation Snapshots" of each lesson and are good starting points for developers. Results and comments on each of the four lessons are located in section 2 of the report. The developers are urged to review the tables and comments and to sample their diversity and depth in order to identify possible areas for revision.

The Pretest-Posttest Evaluation consisted of results from the administration of Student Knowledge Surveys. Before using the materials the students took a Student Knowledge Survey and then the same survey was given again after completing the materials. The t-test results suggest statistically significant differences in the increases from pretest to posttest scores when all schools are combined. The teachers responded to questions about the success of the materials in achieving the learning outcomes. These results indicated high agreement with statements on the effectiveness of the module in achieving the established learning outcomes for each lesson. A response category of “Not Sure” which was available to students to indicate uncertainty for the question was also examined and yielded a substantial reduction in frequency from pretest to posttest knowledge surveys.

The final sections briefly discuss the results and recommendations for the developers. General comments included:

- **Teachers felt that lesson 4 should be expanded or revised.**
- **Lesson 3 rated the highest overall.**
- **Reading levels were appropriate for the age group.**
- **The difficulty levels were appropriate for the age group.**
- **The internet activity, Mystery Cubes and Biological Box were particularly interesting for the students.**
- **There was a substantial reduction of “not sure” answers from the pretest to the posttest.**
- **There was a substantial increase in correct answers from the pretest to the posttest.**

Background Information on the Project

Background and Goals of the Program

"Doing Science" is created with funding from the National Institute of General Medical Sciences and the Office of Science Education (OSE) at NIH. It is the sixth in a series of contracts funded by NIH and developed by BSCS.

The final product will be an instructional module composed of four lessons designed to be taught in sequence over approximately one week. It is intended to be a replacement for part of a standard curriculum in middle school. The final product is a print module that includes inquiry-based activities and supporting materials for the teacher, web activities which complement the module, and a plan for distribution and implementation of the completed modules.

The module is designed to accomplish the following:

- **Provide students with an opportunity to apply creative and critical-thinking skills as a way of discovering solutions to a wide range of problems;**
- **Deepen students' understanding of the importance of basic research to advances in medical and health sciences;**
- **Show students the direct and indirect benefits of scientific discoveries on their health and the health of their friends and families;**
- **Provoke student interest in medical topics;**
- **Help teachers accomplish their educational goals of improving the quality of science education;**
- **Develop curriculum that is sensitive to the needs of teachers with diverse student populations in classrooms across the nation;**
- **Support the implementation of the National Science Education Standards; and**
- **Promote the visibility and missions of individual institutes and centers and the NIH**

The Curriculum Development Process.

BSCS uses a curriculum development process that involves an advisory board, an external design team, and an internal writing team. In the Initial Phase, an Advisory Board meeting of experts in the field is convened at the beginning of the development process to identify the key or critical areas of study in the field as well as the key concepts to be conveyed in the materials. Resources are also sought from the Advisory Board.

Next, in the Content Review Phase, an external design team of subject matter experts and teachers at the appropriate grade level is brought together for several days of brainstorming and writing. This team, with the input of the Advisory Board, designs the activities and addresses options for structuring the materials.

The Materials Development Phase is next. After input is gained from the Advisory Board and the external Design Team, the BSCS curriculum developers begin the serious task of putting structure and form to the materials and various activities.

The Field Test Phase follows and the materials are tested with a national sample. The Evaluation Phase consists of analyzing and reporting the results of the Field Test. These evaluation results are used in revisions to the materials, sometimes minor, sometimes major. At this point there is a second Advisory Board meeting where the evaluation materials are studied and changes are made. This is followed by the Final Production and Distribution Phase in which the final copies of the materials are generated and disseminated.

The Instructional Materials in the Module

The final product is suitable for use with any middle school biology program. There are four lessons:

1. Inquiring Minds
2. Working With Questions
3. Conducting a Scientific Investigation
4. Pulling It All Together

Each lesson contains readings and activities. There is a website for lessons three. Additionally, there are Teacher Background Materials to increase the ability of the teachers to use the materials effectively in the classroom.

The materials are designed to incorporate an inquiry-based approach, the 5E model: Engage, Explore, Explain, Elaborate, and Evaluate (Bybee, 1997).

Teachers, Students, and Test Sites

Primary Field Test Teachers.

Field test teachers were recruited by several methods, including an advertisement placed at the BSCS website, letters of invitation to teachers who had participated in previous BSCS field tests, a notice in the BSCS news magazine, and an ad in the National Science Teachers Association newsletter. We asked interested teachers to complete a teacher background survey to determine their level of interest and commitment and whether they would be teaching appropriate classes during the test period. The background surveys were reviewed by the project director, who selected the participants, and then contacted the teachers to see if they still wanted to participate in the study. Even though by using volunteers we would never have a truly representative sample of schools or school districts, the staff made a concerted effort to assure inclusion of a diverse population in the selection process by selecting schools that had diverse student populations and represented a variety of economic and geographic areas.

In February, 2004, the eight primary teachers were brought to BSCS for a 2-day Field Test Orientation. During the orientation the staff introduced the teachers to the key features of the science content and specific activities of the module. The project supported all travel expenses and the participants received an honorarium of $300.00. Upon completion of the module and receipt of the evaluation materials by BSCS the teachers received an additional honorarium of $300.00.

Secondary Field Test Teachers.

There were two additional teachers who wanted to participate in the field test however; resources were not available to accommodate them. In this case the materials were sent directly to them and they were asked to use them according to the guidelines in the Teacher Background Materials. These teachers received a $100.00 honorarium upon completion of the module and receipt of the evaluation materials by BSCS.

Students in the Field Test.

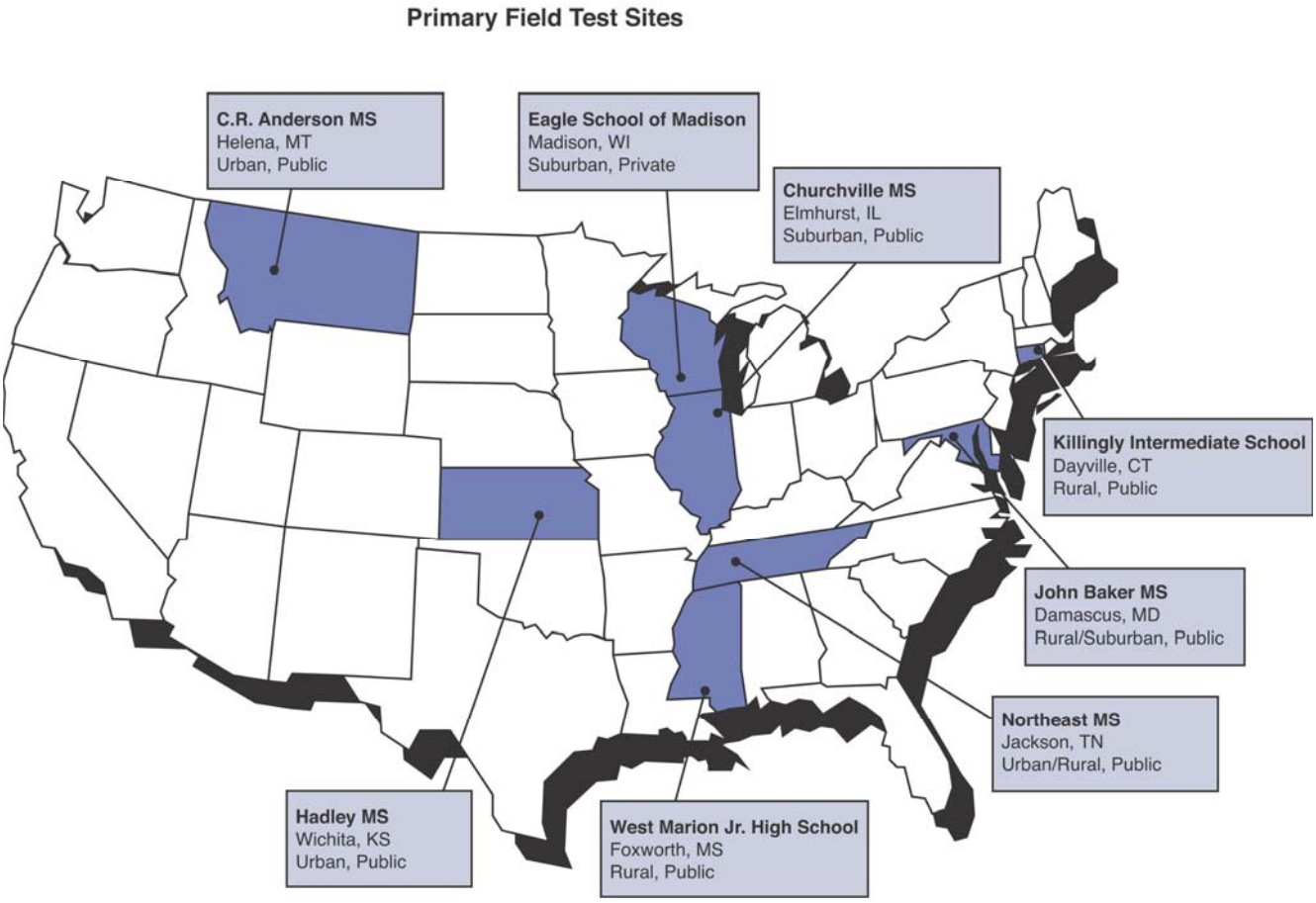
The students at the primary test sites ranged from 6th to 8th graders in middle school. There were 8 primary test schools in the study from school districts in Montana, Wisconsin, Illinois, Connecticut, Maryland, Tennessee, Mississippi, and Kansas. **Figure 1 depicts the dispersed locations of the primary field test sites nationally.**

Table 1 and figure 1 depict the demographic information for the schools in the field test with approximate breakdowns of race/ethnicity using U.S. Census Bureau categories. These data come from the responses given by the students. Separate results are presented for the Primary site schools because they were used to assure inclusion of diverse groups. Totals for the Primary site schools as well as the Primary plus Secondary Site schools are included. All analyses in subsequent sections use the Primary plus the Secondary site schools.

Table 1. Population Characteristics of Primary Site Schools in the Field Test n=8 and Totals for Primary & Primary plus Secondary Site Schools, n=10

School	n	% Asian	% Afr Amer	% Amer Ind	% White	% Nat Haw	% other (Hisp)	% 2 or more	% Female/ % Male	% 6th/7th/8th Graders	% Free Lunch
C.R. Anderson Middle School	124	0	0	5.0	80.7	.8	4.2	9.2	54.5/45.5	0/100/0	25.0
Killingly Intermediate	93	0	2.2	0	88.2	0	1.1	8.6	49.5/50.5	0/100/0	38.7
John Baker Middle School	60	1.7	8.3	0	70.0	0	8.3	11.7	50/50	0/100/0	8.3
Churchville Middle School	120	12.5	.8	0	72.5	.8	9.2	4.2	47.5/52.5	0/0/100	15.0
Hadley Middle School	94	4.3	4.3	2.1	69.1	0	6.4	13.8	52/48	29/29/42	28.3
Northeast Middle School	0	0	0	0	0	0	0	0	0/0	0/0/0	0
West Marion Jr. High	47	0	31.9	0	66.0	0	0	2.1	61.7/38.3	0/77/23	63.8
Eagle School of Madison	41	10.5	0	0	86.8	0	0	2.6	49/51	73/27/0	2
TOTALS FOR ALL Primary SITES	579	4.2	4.7	1.4	76.4	.4	4.9	8.1	51.6/48.4	10/61/29	27.3
TOTALS FOR ALL SITES (Primary & Secondary)	741	6.6	6.3	1.2	67.1	.7	9.2	8.9	51/49	8/58/34	33.4

Figure 1. Primary Field Test Sites



Description of the Evaluation Study

Purposes of the Evaluation

The evaluation has two primary purposes. The first is to gather evaluation data about the functionality and usability of the materials. The curriculum developers use formative evaluation findings to revise and improve the final version of the module. The second is to gather preliminary information about the modules effectiveness in achieving the learning outcomes.

Evaluation Design

Materials Evaluation Design.

There are two primary sources of data specifically on the materials: the Teacher Materials Survey (TMS) and the Student Materials Survey (SMS). Appendix A contains the instructions that were given to the teachers to facilitate their administration of the surveys. Appendices B and C contain copies of the TMS and SMS respectively. The TMS contains a series of questions on the following topics for each lesson in the module:

- General Questions on the Lesson
- Effectiveness of the Lesson in Achieving Learning Outcomes
- The Website (Lesson 3 only)
- Effectiveness of the Activities
- Difficulty of the Materials for both Teacher and Student

Teachers responded to questions about each of these topics on a scale of Strongly Disagree to Strongly Agree (or Very Ineffective to Very Effective) and have space to make comments or elaborate on their ratings.

At the end of the TMS were questions about the overall difficulty of the entire module and what the most and least valuable aspects of the module were. The teachers were asked to make specific suggestions to the curriculum developers to improve the module.

The SMS has a reduced number of topics and items to which the students respond. Similar to the TMS, the students were asked to respond to items on the following topics for each lesson in the module:

- General Questions on the Lesson and,
- the Website (Lesson 3 only)
- Difficulty of the Lesson

The students also have opportunities to make comments about the module and activities, identify the main strengths and weaknesses of the module, and make specific suggestions to the developers.

Pretest and Posttest Evaluation Design.

Student Data.

The evaluation focused on how effectively the materials helped the students achieve the learning outcomes for each lesson. The present study uses the "One-Group Pretest-Posttest Design" articulated by Campbell and Stanley (1963).

Campbell and Stanley represent the design as:

$$O_1 \longrightarrow X \longrightarrow O_2$$

The initial Observation (O_1) is the pretest, which is followed by administration of the experimental treatment (X) and then the second Observation (O_2) or posttest.

The initial observation (O_1) is of the **Student Knowledge Survey 1** (SKS1), a pretest of student knowledge that teachers gave their students before any exposure to the materials. Teachers then taught the module in their classes from beginning to end, until completed. This is essentially the classic experimental treatment (or X in Campbell and Stanley's diagram). The second observation (O_2) is a posttest composed of the same items as the pretest. These items are contained in the **Student Knowledge Survey 2**. Teachers administered the survey to students at the end of the field test. Appendix D contains copies of these surveys. The students answered True or False to statements from which their pretest and posttest scores were determined. In addition, they were given the option, in both the pretest and posttest of answering "Not Sure" on the items in order to estimate the level of confidence they had with their answers.

This type of scoring is often termed "ipsative", that is, the norm or comparison against which the student is measured is their own prior performance (a pretest). The present performance (a posttest) is compared to the prior performance. In essence, the posttest is the student's "personal best" although it may not be the best in the class. This type of assessment is useful because of the different of levels of knowledge or ability at which students enter a class (or use instructional materials).

Learning Outcome Effectiveness Evaluation.

Teacher Data.

The effectiveness evaluation also contains a second source of data. The teachers use the TMS to make judgments on how effectively the materials achieved each lessons learning outcomes. Achieving these learning outcomes is the ultimate goal of each lesson. Their answers provide an additional source of evaluation data.

Results

Surveys Returned.

The module was tested in 10 schools, but Northeast Middle School did not return materials. Of the remaining 7 primary schools and the two secondary schools, a total of 741 complete student survey sets were received. A student survey set consists of a SMS, an SKS1, and an SKS2. All three are necessary for complete analysis of the student data. The remaining 7 primary and two secondary teachers returned the TMS survey, therefore the teacher n=9.

Demographic Results from Surveys Returned (both Primary and Secondary).

The student surveys from all the schools in the field test yielded the following results: Female 49% and Male 51%. All results include both primary and secondary site schools.

Table 2. Pie Chart of Gender Percentages.

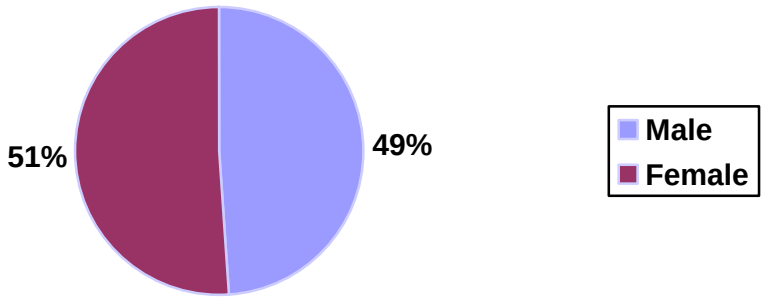


Table 3. Percentages in Census Bureau Categories. Table 3 depicts the results from the student surveys from all schools for the question on "Race/Ethnicity":

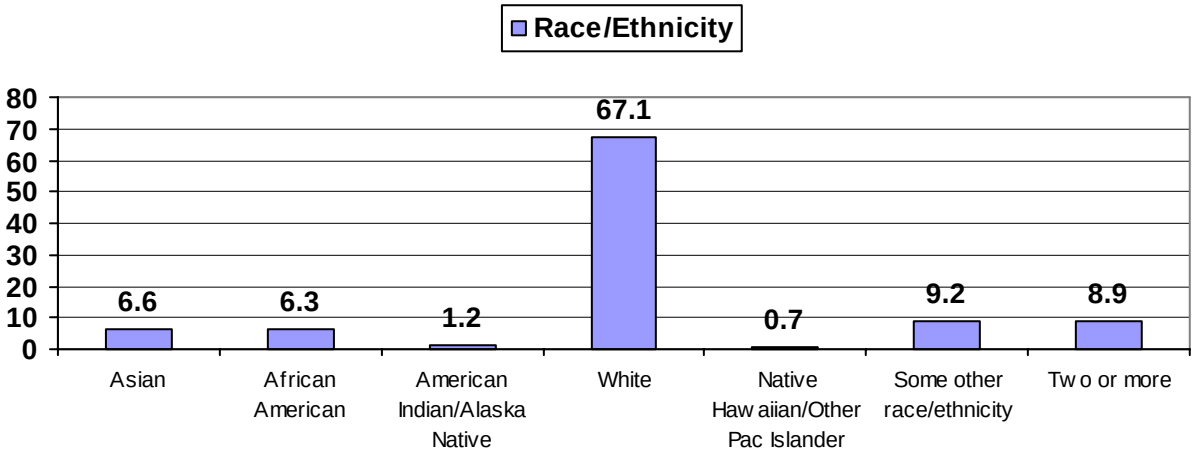


Table 4. Percentages of Students in Different Grade Levels.

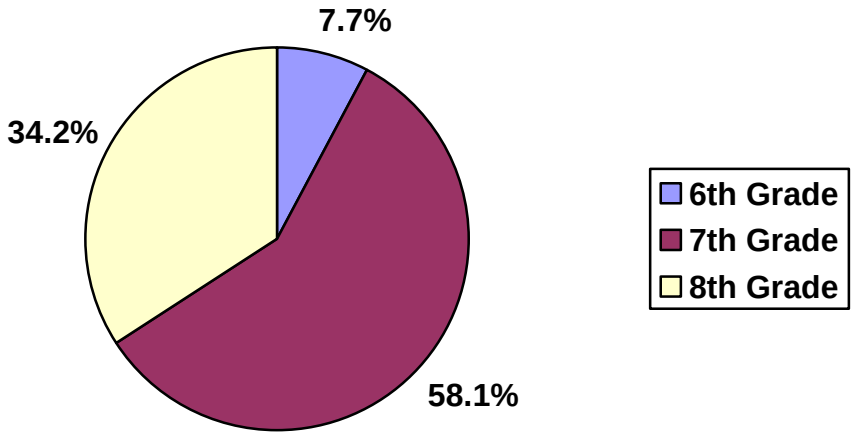


Table 5. Student Interest in Science: Students were asked to rate their agreement with the following three questions.

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. I am interested in science, in general.	3.8	3.8	10.1	24.3	41.5	16.4	4.45	1.21
2. I am very interested in Biology.	8.2	8.9	16.0	31.0	23.2	12.7	3.90	1.41
3. I am good at science, in general.	5.2	7.4	12.3	28.9	36.3	10.0	4.14	1.28

Results of the Materials Evaluation

The evaluation results come from questionnaires completed by the teachers and the students. Appendices B and C contain copies of the questionnaire for each group. The questionnaires were completed after they had concluded using the materials or while they were using the materials. There were demographic questions, fixed-response questions, and open-ended questions on both questionnaires.

The students indicated their level of agreement or disagreement from strongly disagree to strongly agree with statements in each section. The Tables in each section provide the results in terms of the percentage of students who indicated which response. In addition, the items are assigned a value: Strongly Disagree = 1, Disagree = 2, Disagree a Little = 3, Agree a Little = 4, Agree = 5 and Strongly Agree = 6. With these values means and standard deviations were calculated and are also reported.

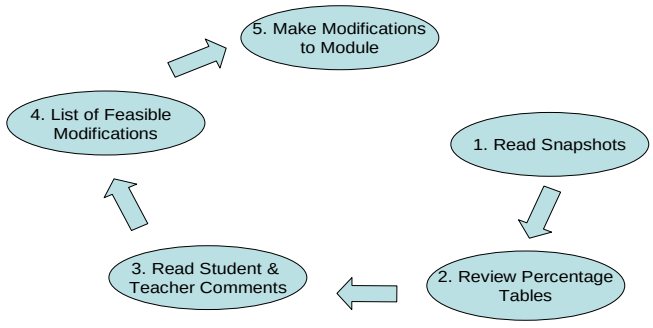
In addition, students were able and encouraged to make comments on any question in the survey for all lessons. The students were also asked to estimate the overall level of difficulty of the module, identify the main strengths and weaknesses of the module, and make specific suggestions for the developers to improve the module.

Utilization of Evaluation Results by Curriculum Developers.

This report is composed of a number of different types of information. The figure below is a suggestion for the developers to consider as they review the evaluation results to assist in making improvements to the module. It is suggested, as depicted in Figure 2, that developers:

1. Review the Evaluation Snapshots in Tables 6-9, going on to
2. Review of the Student and Teacher Percentage Tables in the Lesson Sections,
3. Read the Comments by Students and Teachers in each Lesson Section,
4. Make a list of possible modifications to the module when factors such as feasibility, time, and cost are weighed, and finally,
5. Make the modifications to the module within the time constraints of the project.

Figure 2. Utilization of Evaluation Results



Evaluation Snapshots of the Lessons.

It is useful for the developers who work on specific lessons to have a picture of the impressions of the teachers and students who used their materials. Tables 6-9 contain information extracted from other tables and placed here to provide a "snapshot" of each lesson. In addition, the rankings for the lessons are provided to give an idea of how they compare to other lessons. The rankings are meant to be useful only for gross comparisons. Sometimes the difference between ranks is great, sometimes the difference is quite small. Typical comments by teachers and students are included as well as an "Assessment". The assessment statements are intended to provide a starting point for the developers as they go into the next phase of the development process.

Evaluation Snapshots Activities 1-4

Table 6. An Evaluation Snapshot of Lesson 1: Inquiring Minds

	STUDENT RESULTS	STUDENT RANK	Typical Lesson 1 Student Comments:
	Average Score (1=Strongly Disagree, 6=Strongly Agree)	Rank with other Lessons (1=highest, 7=lowest)	"It was fun to be able to communicate with others while we tried to get the answer."
The lesson was interesting.	4.29	2	"The biology box was the most interesting."
I could read the material easily.	4.99	1	"I liked using tools to discover what was on the bottom."
I could understand the examples and explanations.	4.93	1	"I got to do something other than book assignments."
The lesson made me think about new things and questions.	4.24	2	"[I liked] That we were actually placed in a job to get the answer like real scientists."
I could understand the scientific information easily.	4.73	2	"I didn't like that we couldn't see the other sides and that we couldn't touch the box."

	TEACHER RESULTS	TEACHER RANK	Typical Lesson 1 Teacher Comments
	Average Score (1=Strongly Disagree, 6=Strongly Agree)	Rank with other Lessons (1=highest, 4=lowest)	"it really helped to tape down the cubes because it tempted them less to peek at the bottom."
Students should recognize that science users a process as a means of learning about the natural world.	4.67	N/A	"Upper grades found it very easy to figure pattern on both cubes."
Students should be able to identify the major components of the process by which scientists learn about the world.	4.78	N/A	"It seemed too simple for 8th graders."
Students should have an appreciation for technology that helps scientists collect data, improve accuracy, and analyze results of investigations.	4.44	N/A	"It took extra convincing to get my students to think of a tongue depressor as tech."
The lesson was engaging.	5.56	2	"I am not certain that students will understand totally the 3 learning outcomes with just this 1st introductory lesson. I think they would need more exposure to the ideas."
The lesson promoted thinking, inquiry, and study skills.	5.56	2	"They used evidence to draw conclusions."
			"Students found it frustrating to be left not knowing the bottom of the cube."
			"I think it got them to see that a scientific investigation did not have to involve test tubes and chemicals."

LESSON DIFFICULTY (1= Easy, 5= Just Right, 9 = Hard)	Student	Student Rank	Teacher	Teacher Rank
Lesson Difficulty for Students	3.82	4	3.78	4
Lesson Difficulty for Teachers	N/A	N/A	5.00	1

ASSESSMENT	Lesson 1 rated high with both teachers and students. Students liked the group nature of the lesson and also using tools to do the investigation. Teachers felt that it was difficult to dissuade students from looking at the bottom of the cube. Some ended up taping the cubes down while others covered the bottom with another piece of paper. Teachers felt that the students really got the hang of using evidence by the end of the activity. Teachers stated that the lesson was very valuable and that it got students interested in doing investigative work. The mean time spent on lesson 1 was 1.33 class periods.

Table 7. An Evaluation Snapshot of Lesson 2: Working With Questions

	STUDENT RESULTS	STUDENT RANK	Typical Lesson 2 Student Comments:
	Average Score (1=Strongly Disagree, 6=Strongly Agree)	Rank with other Lessons (1=highest, 7=lowest)	"I liked making new testable questions." "I liked that we learned more about scientific questions." "I liked to compare what I thought about the problem and what other people thought of it." "You had a chance to actually use the information that you had been given in a scientific procedure." "As a class, we worked together and answered the questions." "It was hard to figure out how to make them more specific."
The lesson was interesting.	3.90	4	
I could read the material easily.	4.80	4	
I could understand the examples and explanations.	4.60	4	
The lesson made me think about new things and questions.	4.18	3	
I could understand the scientific information easily.	4.59	4	

	TEACHER RESULTS	TEACHER RANK	Typical Lesson 2 Teacher Comments
	Average Score (1=Strongly Disagree, 6=Strongly Agree)	Rank with other Lessons (1=highest, 7=lowest)	"They had a hard tome with coming up with "testable" questions." "I believe they still would need more practice to develop testable questions and come up with their own scientific questions." "Sometimes difficult to keep students focused on the question aspect, and not the investigation aspect." "It will take additional time for students to really be comfortable with this." "Most of them chose to Quick and Tasty segment or the Loud Music Paragraph. Only a few made questions on the vitamin C option."
Students should be able to ask questions that can be answered through investigations.	4.78	N/A	
Students should be able to formulate their own scientific questions and identify the type of evidence needed to answer them.	4.56	N/A	
The lesson was engaging.	4.11	4	
The lesson promoted thinking, inquiry, and study skills.	5.0	3	

LESSON DIFFICULTY (1= Easy, 5= Just Right, 9 = Hard)	Student	Student Rank	Teacher	Teacher Rank
Lesson Difficulty for Students	4.66	2	5.44	2
Lesson Difficulty for Teachers	N/A	N/A	3.89	3

ASSESSMENT	Teachers and students rated lesson 2 low, but there are many positive comments about lesson 2. Students were excited to come up with questions and compare them to others in the class. Some teachers felt that students needed more practice coming up with testable questions. Teachers found it hard to focus students on the development of testable questions; students wanted to investigate the questions. There are a number of valuable suggestions in the teacher comments for lesson 2. The mean time spent on lesson 2 was 1.44 class periods.

Table 8. An Evaluation Snapshot of Lesson 3: Conducting a Scientific Investigation

	STUDENT RESULTS	STUDENT RANK	Typical Lesson 3 Student Comments:
	Average Score (1=Strongly Disagree, 6=Strongly Agree)	Rank with other Lessons (1=highest, 7=lowest)	"The website was easy to understand and it made the investigation a lot more interesting." "It felt like my group and I were professionals. It was fun trying to come up with answers." "This activity was fun, I enjoyed using the charts and graphs and the pictures to figure out the source and cause." "It really made you work, think and it built up suspense and lots of questions." "I liked this lesson because it wasn't confusing at all." "I didn't like the percentages on the graphs. It would have been better if it just said how many students each day." "All that we did was look at data and write down our answers."
The lesson was interesting.	4.61	1	
I could read the material easily.	4.81	3	
I could understand the examples and explanations.	4.78	2	
The lesson made me think about new things and questions.	4.49	1	
I could understand the scientific information easily.	4.73	1	
I was able to navigate easily in the website without confusion.	4.78	N/A	
The website helped me understand how to conduct scientific investigations.	4.50	N/A	
The website made the lesson more interesting.	4.86	N/A	

	TEACHER RESULTS	TEACHER RANK	Typical Lesson 3 Teacher Comments
Students should be able to formulate testable questions and conduct an investigation	5.11	N/A	"The lesson had a lot of data in many forms…this seemed like too much at first but was just right because it enabled even the brightest students to be challenged." "Some students complained that the pages looked to similar and thus had a difficult time finding where they wanted to go." "This is fairly abstract for 12 year olds." "The students really liked interpreting the graphs." "The website gave the entire investigation a feeling of authenticity and reality." "Some even tried to do web searches for related content, or look for the schools."
Students should be able to use graphs and data tables to analyze and interpret data.	5.56	N/A	
Students should be able to develop explanations and predications based on evidence.	5.56	N/A	
The lesson was engaging.	5.67	1	
The lesson promoted thinking, inquiry, and study skills.	5.78	1	
The students were able to navigate easily through the website without confusion.	4.75	N/A	
The website aided in comprehension of the lesson.	5.43	N/A	
The website made the lesson interesting for students.	5.86	N/A	

LESSON DIFFICULTY (1= Easy, 5= Just Right, 9 = Hard)	Student	Student Rank	Teacher	Teacher Rank
Lesson Difficulty for Students	4.77	1	5.56	1
Lesson Difficulty for Teachers	N/A	N/A	4.0	2

ASSESSMENT	Lesson 3 rated highly with both students and teachers. Students loved doing investigative work, while teachers tended to underestimate what students would be able to accomplish with the data. Students valued the experience of working as "professionals" and really got into the role of scientist. Teachers and students felt that the website added a feeling of authenticity to the investigation. Teachers were able to make good connections between the lesson and real world scenarios. Mean time for lesson 3 was 2.22 class periods.

Table 9. An Evaluation Snapshot of Lesson 4: Pulling It All Together

	STUDENT RESULTS	STUDENT RANK	Typical Lesson 4 Student Comments:
	Average Score (1=Strongly Disagree, 6=Strongly Agree)	Rank with other Lessons (1=highest, 7=lowest)	"I was surprised about how much I did over those few days."
The lesson was interesting.	4.09	3	"I should have filled my paper more."
I could read the material easily.	4.81	2	"It helped being on a team. My notes helped me."
I could understand the examples and explanations.	4.69	3	"My conclusion (group conclusion) was actually fitting with everyone's conclusions."
The lesson made me think about new things and questions.	4.13	4	"I liked that some people had different ideas than others, and I liked hearing all of the ideas, and processes of different people."
I could understand the scientific information easily.	4.69	3	"I was so confused since we never really know what caused the illness."

	TEACHER RESULTS	TEACHER RANK	Typical Lesson 4 Teacher Comments
	Average Score (1=Strongly Disagree, 6=Strongly Agree)	Rank with other Lessons (1=highest, 7=lowest)	"This lesson is very necessary to tie everything together."
Students should be able to recognize the importance of diet and weight-bearing activities to the strength and health of their bones.	5.22	N/A	"this lesson promoted remembering details, referring to investigative forms and pulling it all together."
Students should be able to analyze data tables to make evidence based conclusions.	5.33	N/A	"It was a little redundant to what we discussed in lesson 3."
Students should appreciate that more minerals, especially calcium, in bones makes them stronger.	5.11	N/A	"I could really see a difference between 6th grade students and 8th grade."
The lesson was engaging.	4.44	3	"I believe an activity could be used that was more engaging. I think you need to do some more brainstorming on this one."
The lesson promoted thinking, inquiry, and study skills.	5.00	3	"My students really want to know what the cause of the illness ended up being in the real case – Please tell us!"

LESSON DIFFICULTY (1= Easy, 5= Just Right, 9 = Hard)	Student	Student Rank	Teacher	Teacher Rank
Lesson Difficulty for Students	4.54	3	4.56	3
Lesson Difficulty for Teachers	N/A	N/A	3.11	4

ASSESSMENT	Teachers and students felt that the final lesson in the module was valuable in revisiting the concepts and details from the first three lessons. Teachers felt that it helped to pull everything together and students seemed surprised at the amount of information they had gathered through previous lessons. The students (and some of the teachers) were disappointed that they never found out what the illness was! The mean time for lesson 4 was 1.33 class periods.

Lesson 1: Inquiring Minds

Lesson 1: Teacher Results

Table 10. Lesson 1: *Inquiring Minds* General Questions

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	*Standard Deviation*
1. The lesson contained an appropriate amount of content.	0	0	0	11.1	55.6	33.3	5.22	*.67*
2. The lesson promoted thinking, inquiry, and study skills.	0	0	0	0	44.4	55.6	5.56	*.53*
3. The lesson was engaging (that is, it got students more interested in the science content).	0	0	0	11.1	22.2	66.7	5.56	*.73*
4. The lesson took an inquiry-oriented approach.	*0*	*0*	*0*	*0*	*22.2*	*77.8*	*5.78*	*.44*

Comments:

It seemed as if the lesson was about the right amount of difficulty for most students but for some the patterns were not difficult enough. When the students were coming up with their testable questions for the mystery cube, 1 student asked "Why is there a number 2 on the bottom of the cube?"
My students really enjoyed the mystery cube and the biological box. I taped the mystery cube into bins which were placed on each table. The kids were not able to look at the bottom this way and they did a terrific job working with their groups identifying what sides were shaded and which weren't. Most groups were able to make the necessary associations of adding up the numbers and determining the food chains that matched the habitats.
Students loved the "game" and were astounded when the bottom of the cube was not revealed.
Students really enjoyed this. Upper grades found it very easy to figure pattern on both cubes. But they needed to think about relationship to scientific process, so it was a good tool to get them started.
As expected, the students got frustrated with the idea they would not have the answer to the Mystery Cube. Using a dental mirror, 1.5 cm is almost too much height for lifting the Biological Box. Dental mirrors are not readily, or cheaply, available at local drugstores ~ recommend teachers located ahead of time.
When doing the mystery cube activity, it really helped to tape down the cubes because it tempted them less peek at the bottom. Biological Box should have been taped down too.
It seemed too simple for 8th graders. I think it would work well with elementary school.

Table 11. Effectiveness of Lesson 1: *Inquiring Minds* Materials in achieving Learning Outcomes

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. Students should recognize that science uses a process as a means of learning about the natural world.	0	11.1	0	11.1	66.7	11.1	4.67	1.12
2. Students should be able to identify the major components of the process by which scientists learn about the world.	0	11.1	0	0	77.8	11.1	4.78	1.09

3. Students should have an appreciation for technology that helps scientists collect data, improve accuracy, and analyze results of investigations	0	11.1	0	33.3	44.4	11.1	4.44	1.13

Comments:

I am not certain that students will understand totally the 3 learning outcomes with just this 1st introductory lesson. I think they would need more exposure to the ideas.
The students approached both activities using a step by step process. First they gathered information. Then they formed a hypothesis or predicted what they thought would be on the bottom. They used evidence to draw conclusions. I think they were disappointed when I did not show them what was on the bottom of each cube but they understood by the end of the unit that Scientists don't always find out what they want to know.
For # 1 - I should have reemphasized this. For # 2 - Instead of homework, perhaps another strategy, such as an exit card for immediate feedback & reinforcement. For # 3 - Effectiveness here might be better served by asking the students to evaluate their actions related to inquiry.
In my first class, the "technology" of lifting the corner of the cube resulted in a couple of overturned cubes - in the other 4 classes, we slid the cube to the edge of the table, worked much better, but students did not immediately recognize that as "technology".
They needed guidance to fully relate to # 1 they tend to focus on one area and not really extend to the natural world. But the outcome was met.
Unfortunately, our students are regularly exposed to "technology" in our school. Actually, this is not truly unfortunate, but it does make the technology used in this lesson seem somewhat rudimentary. It took extra convincing to get my students to think of a tongue depressions as tech. :-)
The use of the mirrors was a little unclear to the students.

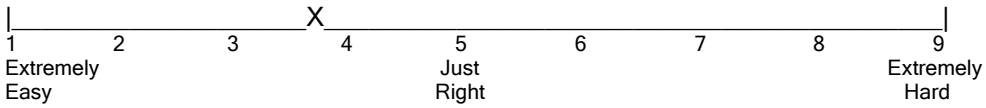
Table 12. Effectiveness of Activities in Lesson 1: *Inquiring Minds*

	Very Ineffective 1	Ineffective 2	Mod. Ineffective 3	Mod. Effective 4	Effective 5	Very Effective 6	Mean	Std. Dev.
1. Overall, lesson 1: **Inquiring Minds** was	0	0	0	11.1	44.4	44.4	5.33	.71

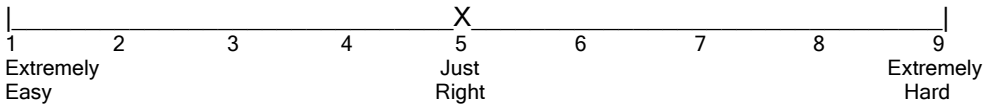
Comments:

I'm real unsure at this point as to whether the patterns on the cubes be made more difficult or keep it simple for the majority of students.
This activity motivated all the students to get involved.
This was an effective way to get the students ready to move on to really understanding how scientists gather evidence to support their investigations. It allow them to see that a lot of different variables are needed to support an investigation.
Discussion was open and easy. Students made the appropriate connections easily, or with limited guidance.
The students really got into the problem. If I were to do this again, I might leave the bottom of the numbered cube blank. Students immediately assume the #2 is on the bottom….of course this is based on the evidence they've gathered. However, I would like to use this as an opportunity to show them that despite prior experience, the answer they get many not always be what they expect.
I think it got them to see that a scientific investigation did not have to involve test tubes and chemicals. As long as you have a question you want answered, you can conduct a scientific investigation.

Lesson 1:*Inquiring Minds* Overall Difficulty for the Student as Rated by Teachers.
The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 1 difficulty mean = 3.78, std. dev. = .97.



Lesson 1: *Inquiring Minds* Overall Difficulty for the Teachers (i.e. preparation, delivery, etc.).
The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 1 difficulty mean = 5.00, std. dev. = 1.58.



Comments:

I was very pleased that every group recognized the food chains represented on the Biological Box. They also recognized the savannah-due to their experience with "The Lion King". Thanks for choosing components so close a 7th grade students prior knowledge!
Building the boxes took me a while. I actually had some student helpers that weren't involved in the field test cut out my templates. I assembled the boxes myself. I put a weight inside the biology box to help keep the savannah food chain side down. The boxes are really lightweight and easily get knocked over if you don't put a weight inside. You can't tape the one down because they need to be able to move the box to use the mirror, ruler and pencil "technology" tools to see the corner on the bottom. I suggest leaving the zebra off and that way the teacher doesn't need to be concerned about them looking at that part. The clip art needs to be reversed! The grass, fish and acorns should be at the bottom of the chain and the lion, polar bear and hawk should be at the top.
Great lesson - lists of good discussion among the groups, kids wanted more. It now take sometime to make the cubes. I taped the number cubes down to piece of construction paper - too many curious "what's this, let me see " kids in my afternoon classes - taping on paper works great.
Enough to get them hooked. Only time consuming part was assembling the cubes ~ but very easy. Students found it frustrating to be left not knowing the bottom of the cube ~ really made a point with them!
In Advance instructions: Error for photocopies says to "make 1 copy per class" but you actually need 1 per group. This was a very tight fit. Activity 3 sent as homework. Need more time!
It took a little longer than I had expected to prepare all those cubes. Overall, the lesson was effective (see comments to Part C)

Table 13. Total Number of Class Periods spent on Lesson 1: Inquiring Minds

	1	2	3	4	5	Mean	Std. Dev.
Class periods spent on Lesson 1	77.8	11.1	11.1	0	0	1.33	.71

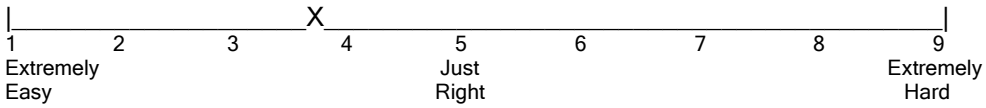
Lesson 1: Student Results

Lesson 1: *Inquiring Minds*

Table 14. General Questions on Lesson 1: *Inquiring Minds*

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The lesson was interesting.	4.4	5.4	9.3	31.1	37.6	12.2	4.29	1.22
2. I could read the material easily.	.3	2.0	5.1	16.1	43.4	33.0	4.99	.96
3. I could understand the examples and explanations.	.7	1.8	5.2	17.0	46.5	28.8	4.93	.97
4. The lesson made me think about new things and questions.	5.0	9.1	11.5	25.0	30.1	19.3	4.24	1.39
5. I could understand the scientific information easily.	1.0	3.4	7.1	23.4	40.8	24.4	4.73	1.07

Lesson 1: *Inquiring Minds* Difficulty.
The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the students to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 1 difficulty mean = 3.82, std. dev. = 1.69.



Student Comments on Lesson 1:

This lesson had a lot of questions to ask and it was sort of good study.
You shouldn't give 7th graders a cube/or cube plate and tell them not to touch it.
I think that this lesson was very interesting & fun to do.
The box experiment was ok I liked it that's it.
This was the best part of the unit.
It was fun to be able to communicate with others while we tried to get the answer. It was a fun activity.
I liked making up the testable questions. I didn't like anything else.
This whole lesson was fun. I understood it easily and the homework was easy.
This lesson was very good. I really liked the biological box and mystery cube. The homework was easy.

1) It didn't make me think about a lot of questions. 2) I liked trying to figure out what was on the bottom of the boxes.
I thought the lesson was good and interesting. The homework was easy because I could easily understand the homework.
The two lessons taught me patience because I just found out what was on the bottom of the box today.
I think that this lesson was easy because at the beginning I didn't know what a testable question and now I do. Also, I liked this lesson because it was challenging as afar as materials needing to be understood.
I thought that the examples and explanations were easily understood and the material was read well. The lesson made me think about new things and questions because I

never knew what a testable question was or how to write one, but now I do know how.
I think the lesson was interesting because it was fun and some of a challenge and it was interesting because it made me have to think pretty hard.
I kind of like the experiments on the boxes, they were a little too easy to do.
I thought they were fun and they both were very understanding. It reminded me of the scientific method.
This was fun doing this, we got to guess and we got materials. I liked both of the projects, they were cool.
This was fun and interesting thing to do, we got together with a partner so it wouldn't be as difficult.
I was absent the day we did the mystery cube. I thought the lesson was good. We got to learn a food web. I understand the homework.
I was absent on one of the biology box days. I thought this lesson was good because I had to challenge my brain and work harder to get my answer. The homework was easy after I figure out the problem.
I think that this lesson was interesting and fun because I liked try to guess what the answer was.
I thought the lesson was interesting. Also, I thought the materials was a little difficult. I like that the information was easy.
I didn't really get the testable question at first but then I got it and some of the other words I did not get.
The lesson was interesting, but I did not like how they didn't give us an answer. When we were doing the mystery cube, it made me ask questions.
I liked this lesson because it was mysterious. You also had to think about what was going to be on the bottom by thinking really hard and realizing a lot more things.
It think it was fun trying to figure out what was on the bottom. It made me wonder a lot what was on the bottom.
This lesson was pretty interesting, it was easy but fun. The lesson didn't make me think about new things and questions.
I was not here for Biology Box Day. My comments will only be the mystery cube. So will the things on Lesson 1
This lesson was very easy and I would recommend this to lower grades to get them to think.
I agreed with most of them. It was fun.
The Biological Box made me think more than the mystery cube. It made me think.
It was fun how you guess. It got our minds thinking, it was cool. It could have been anything on the bottom.
I liked how the mystery cube had us guess what number was on the bottom. It was easy. Also, the homework and worksheets were easy to understand. The Biological box was a little harder because we had to guess the whole food chain.
I really enjoy the Biological box and Mystery cube. I think that everything was really weird.
I think they were both very easy. The biology box was a little harder. I understood all the questions. It did not really help me think about questions.
These comments are only for the biology box, as I wasn't in school for the mystery cube.
I really thought that the mystery cube and the biology box were very easy and gave me time to think and understand the fact that there was something at the bottom that we had to figure out.
I was very interested with the biology box. The mystery cube was very easy. I was not happy when I wasn't shown the bottom. I liked it though.
The mystery cube was a little interesting because it made us want to look at the bottom of the box. The lesson made me think of new questions because there was hundreds of different things that could have been on the bottom of the box.
I think the biology box was very interesting. I thought it was neat because it made me ask a lot of questions. It was hard to find out that the opposite sides of the cube were animals and their habitats.
I like doing the Biology Box a lot. I didn't like the mystery box because it was too easy.
The mystery cube was fun but not fun. It was hard to not touch it. The biology cube was kind of easy. The picture on the bottom of the cube was difficult to figure out.
I thought the material was really easy to read. The mystery box and the biological box were interesting that we couldn't see the bottom.
The mystery cube and biology box made me think more about the questions asked and why I asked them.
I thought that the first lesson was a good way to start the project. It wasn't overly challenging or easy.
The lesson was fun and very interesting. I think all schools should do this lesson.
I thought it was easy because my teacher explained them well. The biology box was the most interesting.
The mystery cube was pretty fun. It was fun working with your table to get answers to our questions. Mrs. Craig gave us a nice little project to make us use our brains.
On the box with the animals why couldn't we touch it? This was very interesting to do.
The mystery cube was pretty easy because the patterns were easy to find out. The Biology box was harder.
The mystery cube and the biological box was a good way to get this unit started. It helped us to start asking questions that we would need for the next lesson.
The mystery boxes were fun and easy but kind of frustrating because I wanted to know what was on the bottom.
The Biology box was fun because we got to guess what was on the bottom. It was cool when we found out our answer was right.
The 2 boxes were sort of hard to figure out the bottom at first. After getting a clue it became pretty easy.
The experiments were very interesting and they geared inquisitive thinking. The parts of the experiments were planned out and distributed well.
I want to know what is on the bottom of the box. Why can't we see the bottom of the box?
In this Lesson 1, I was very curious and anxious to find out what was on the bottom. It was a very easy and I definitely had many questions about this and I really liked it.
I love Biology box and mystery box because it makes your brain work hard and think. I thought it was easy. I hope to do more of them.
The lesson was pretty easy. The homework was easy to read too.
I thought the boxes were interesting and easy. I also wanted to know what I couldn't see.
The lesson was a little bit interesting, but it did not really get my brain going. These cubes were two of the more duller activities. All the materials were easily read and understood by myself, as most do. Although, since the activity was quite dull, it did not make me think about any new questions.

The Biology box was harder than the Mystery cube. I understood the instructions on the homework really good.
I thought it was pretty easy.
The lesson made me think about more question and new things to ask. The Biology box was a little harder than the Mystery cube.
The lesson wasn't that interesting because we couldn't move the box. The homework wasn't that hard.
I liked this lesson, it was kind of confusing. I understood the lesson and worksheet. I lost my train of thought after awhile because I got really bored.
I liked the mystery cube.
The lesson was not very interesting because I got bored, very easily and after awhile. I would just give up on myself. The lesson did not make me think about new questions.
I was only there for the Biology box so my comments are on that. I found the homework assignment very confusing. The lesson was kind of boring. I didn't like it that much.
The animal box was cool. I just like to learn more about animals so it was easier than the number one.
The mystery cube was easier than the biological box. This lesson was ok, but not that interesting.
The mystery cube and biological box was interesting because all I was thinking about was what was on the bottom and wanted to find out what was there.
The experiments were little interesting. I liked the biological box.
The Biology box was fun, making questions, wondering what's on the bottom, the mystery box was also really fun too.
The lesson was dull which made it a little boring. There was barely anything to read. The homework was simple to read. The project was much easier because we worked with the class.
The lesson was kind of interesting but we have done other lessons that I've enjoyed more or gotten more out of.
The material was very fun and it was very interesting.
On the mystery cube, I was a little frustrated because I couldn't see the number at the end, it was good. It was taped because some kids may have looked. Overall, I could understand everything well.
I didn't cheat and if the thing wasn't taped I probably would.
The Biology box should have been taped to the edge because you could have seen the zebra by mistake. It was good that the mystery cube was taped. Some of the process was boring. Especially the questions.
It was frustrating because we couldn't see the bottom.
This lesson was ok, but I would have liked it more if we saw what was on the bottom of the box.
I liked trying to figure out what is on the bottom. I did not pick up the biology box. It was frustrating not being able to see what was on the bottom.
I was absent for the biology box and the biology box homework. I got frustrated with the mystery cube because I couldn't touch the cube.
I really liked this subject except we went over 2 cm. so we saw the zebra. I didn't like having the mystery cube taped down though.
When our group looked at one of the angles both corners came off and we didn't know so we saw the zebra also.

I was only present for one of two days and I didn't do one of the papers. We moved the box of the edge a little too much and saw the zebra.
I liked the Mystery cube and Biological box activities.
I am good in science but I am not too good on tests.
I could understand all of it. This specific experiment was interesting compared to some of the other stuff we do in science. It didn't bother me that we couldn't look under the boxes until after.
When we did the biology box, I looked at the bottom and saw a stripe (oops)
The material did not make new questions in my head but I still enjoy the experiment. I did not cheat or take a peek.
I wanted to see the bottom of the boxes but I couldn't!
I wanted to poke it.
You could make it a little bit more fun
I wish we could have looked at the bottom of the first cube.
I think we should get to use materials for both cubes.
What reading material?
This was a fun lesson because it made us want the box & it tempted us it was fun.
I liked the way that this project forces you to think outside of the box.
I don't think this activity made us think about new things, we just thought of the things were normally would.
Number 2 doesn't relate!
I enjoyed this lesson!
Was very simple, almost too simple.
Why couldn't we touch the cube?
Try to make the pictures bigger so that they are easy to tell what they are.
It was a little too easy.
I thought it helped me realize that you either know something as a fact, or you don't know. In other words, you can't assume anything.
It was very interesting & fun!
It was especially easy understanding the material and would be better used for 3rd or 4th graders.
The lesson was interesting, but I did not find it useful for anything.
It was stupid that we didn't get to see what was on the box, because everyone thought it was the same thing. (We should have been shown the bottom of the box immediately after class).
I don't think that we read any material for this activity, except for the numbers on the cube.
The question I could read the material easily refers to what material. I evaluated it as if it was the boxes themselves but this question should be more specific.
I don't really understand what is meant by "I could read the information easily".
Finding out what was on the bottom of the cubes seemed obvious, but this activity showed what was evidence and what was a conclusion based on evidence.
The materials given to us were really helpful.
The lesson was kind of easy.
Overall, it was not as fun as you said
The lesson was interesting to me because it made me use my mind and the resources around me. Basically it gave me a fun challenge.
Keep it real my brothers & sister
It was very interesting
The lessons were really boring.
Very, very easy!

nice
All I could say is that the lesson was very very interesting, it was something new.
I thought this was a good lesson because it made me think of different ways to find an answer.

The lesson wasn't that interesting. Could've been better. Maybe, more engaging.
I got how to do the labs but sometimes I didn't understand the material.

What did you like most about lesson 1?

I had to be creative to find out what was on the bottom.
Nothing
It was fun.
I liked it because it was interesting
We got to work in groups
To find out what was going on in different schools
The information
Not knowing the patterns
I liked wondering what was under the bottom.
Finding out what was on the bottom of the Biological Box.
That I could understand it
Not knowing what was under the box
Working like a mystery woman.
Using Technology
I liked using tools to discover what was on the bottom.
It was fun learning how scientist did it.
I liked making questions to find out what the answer was.
It was fun to find out more what comes next and to figure it out.
You had to think outside the box.
How fun it was
It was interesting
It was easy
I liked that we had got to do something and learn how you guys work to figure out stuff.
Using technology to find what was on the bottom of the cube.
The number cube
The suspense
Trying to figure out what was on the bottom.
It was really interesting to see if your answer was right.
About tring to figure out the puzzle.
Not having much homework and the computer lab.
We got to work together
It was entertaining
That it was not too hard and I wanted to find out what happened to the kids so I just kept going.
It was fun.
Nothing
Nothing
Making up the questions and figuring it out.
Looking at maps
What I liked was that it made us think & determine what was on the bottom.
Thinking about it
My group
I got to work with my friends
I did not involve much paperwork and no homework.
It was interesting because we got to do different activities.
When we got to use the technology to look under the cube.
I like learning about the bacteria and other viruses.
It was fun trying to figure out what was on the bottom and the patterns on the cubes.

That it was easy and it made you think.
The thing I liked the most was making observations.
I liked finding out what was on the bottom.
I liked to guess and use one size to figure out another.
Seeing how things fit together.
It was easy
It tested your thinking
I like when we could not touch the box and we had to guess what was on the bottom.
We did not have any homework.
Working in groups
I liked to guess what was on the bottom.
It was about nature
It was interesting and fun
I liked the Biological box
I liked that we had to think like scientist and come up with an explanation.
Trying to guess what was on the bottom of the cube.
I got to do something other than book assignments.
Trying to guess what was on the bottom of the cube.
Figuring out what caused the illnesses in the computer lab Lessons 3 and Lesson 1
I liked the part about asking questions
It was easy to do.
The mystery cube activity
Going on the computers and doing that activity
Figuring out what was on the bottom of the cube.
No homework
It was interesting and had mystery to it
Didn't have homework
Trying to find out what was on the bottom
They mystery cube
Trying to guess what was at the bottom of the cube.
Trying to figure out what was on the cube.
It was neat to try and figure out the other side.
It was easy
Everything
Finding out what happened
I liked the fact that you had to find evidence
What I liked most was that you couldn't touch the cube with your hands.
Working with friends finding out what was on the bottom
The mystery of finding what's missing
What I liked most about the lesson was it made me think. I also liked it because I enjoyed learning about new things.
When we found out what was on the bottom
Using technology to see what was on the bottom of the cube.
We got to guess about what was on the bottom of the cube and think of things that gave us a clue to what was on the bottom
That it got us off homework for a day.
All of it

It was fun, trying to figure out what was on the bottom.
The mystery cube project was the best.
Trying to find the number
I liked learning about the food chains.
You had to work in a group instead of by yourself
I thought that it was fun and we got to use new strategies and had to use our brain harder.
Trying to figure out the answer
It was hard to figure out
The mystery cube
That you had to guess what was on the bottom
I liked that you had to find things that were similar about the cube
It was fun looking under the box with a mirror and nail file.
The little pictures on the boxes.
I liked being able to work as a group NOT Solo
The fact that we had to find out something that we couldn't see by patterns.
It was something that the class got to do together.
Was to find out was on the bottom without looking or picking it up.
Being able to guess what was on the bottom of the cube.
A good guessing game
It really made me think and made my group & I communicate and come up with answers we all agreed on. It was fun and challenging.
It made you look at things in a whole new prospective.
That you got to learn how to answer your questions and guessing and of your knowledge of the problem.
It took smarts
I liked that we had to investigate and come up with questions and conclusions.
It was fun to investigate
Finding what happened
I suppose the interesting restrictions, i.e. not being able to look at all sides of the box, etc..
Being able to talk to one another
We got to work in teams so it helped.
I liked how we had to figure out what we didn't see on the other side.
It challenged you to make a conclusion without much information.
The figuring out of the lesson. For example, understanding that the animals and scenes went together.
It was challenging
putting ideas together to get the most sensible answer
It was fun.
I liked it because I wanted to know what was on the box.
figuring out what was on the bottom
It was a challenge to find out what was on the bottom of the cube
It as easy.
That we got guess what is under through investigating
It was fun
It was fun
It made me think and learn.
It was like being a scientist.
With the help of other students you do not have to do a scientific inquiry on your own and it was a little of a challenge to figure out what was on the bottom of the cubes.
We had partners
What I liked was when we had to figure out what was in the bottom of the Mystery cube.

It made us think more and ask questions to ourselves.
I liked how our group kept asking more and more questions
It was quick and best.
It gets your brain working.
The part where we were in groups
everything
You got to figure out problems and I love to do that
It made me think
That we had to find what the thing was on the bottom of the cube.
Honestly, nothing
That it lead to more questions, working w/other scientists
It was fun to guess & we all thought it looked like the background of the lion king so we sang a song from that.
It was good to start with. I thought it was kinda fun.
I really liked discussing with my partner about what was on his side of the box and putting our ideas together to come up with a conclusion as to what was on the bottom square.
That you had to communicate with your group to find the answers
looking at the cubes
It got everyone in the group to really think about things & questions
Guessing what was on the bottom of the second cube
Trying to find creative ways to figure everything out.
the guessing part
It was easy
It was fun
I liked working in groups to figure out the answer and liked thinking about the things more.
it was easy to follow
That we were actually placed in a job/side to get the answer like real scientists.
it was easy
having to find out was on the other sides.
Trying to find out what's on the other side
It was very perplexing and it's the kind of thing that I like to do.
We (as a group) solved the hard question that was put out for us.
Communication, like working with people
It made me think a little and it was fun to figure out what was underneath the cube
We got to work together, it wasn't that easy and it was a fun activity.
how we had to figure out patterns to find what was on the bottom.
working in groups
looking at the charts
that you had to work in groups to figure out what was on the bottom.
We had to look for the answers. They weren't just given to us like most teachers would do.
Being in groups.
That we got to look at a box & try to figure out what the number was
It made us think about different possibility
It was easy and made me think a little
It wasn't that hard and you got to work in a group.
that the answer wasn't just handed to us we had to guess and tell each other what we had and we couldn't look. It was a neat idea.
I liked the fact that it helped to prep students for the more

challenging investigations that followed.
Working in groups
When we had to find what was on the bottom
The Biological Box because it was more challenging.
That I could talk with the people in my class about stuff
We all tried to predict what might be on the bottom, it was like putting a puzzle together.
That we got to work in groups. I liked that it was more of a talking activity rather than a writing activity. I liked how we asked questions and then used the process of elimination to find the answer and I liked how we had to think and do comparisons in the Biological Box.
I enjoyed solving it & creating conclusions.
Talking with people to get the answer
Getting to find out how the sides relate
I liked working on it with my group
It made me think of new questions.
wasn't too hard, wasn't too easy
It was fast
I liked being able to think out of the box.
it made you think
having to work in groups and talk for it to work
It wasn't boring
It made think and it was fun
It kept me thinking and active.
Nothing because I didn't understand it
Answering my questions and collecting data
It was easy and straight forward
it wasn't very difficult to understand
It was easy to understand
Working in groups and helping each other out to find out what the answer was on the bottom on the block.
I had to think a little bit
I liked it when we had to figure out what was on the bottom of the cube.
The mystery cube
got to work with people
there were no tricky situation, it was all based on one question & it was pretty easy because it only used general knowledge.
We had to investigate on a case.
I liked writing testable questions.
Nothing really, except getting to talk.
The visual and communication of the lesson.
The way they had to put clues together to find answer for the question.
The most fun was figuring out the question
We did investigation on testable questions.
I like when we had to figure out what was in the box.
I really liked everything about this lesson.
We helped each other
The Biological Box
Asking other people the questions and trying to figure out what was on the bottom.
I liked the Biological box the best
I liked working in groups
I liked when we used a mirror to find out what was on the bottom of the Biological Box.
I liked working in groups.
I liked asking the questions the most in this lesson.
I could work together with the class on the lesson as a group.
When we were asking people on the other side what they saw.
I like it when we tried to find the number under the cube.

I really didn't like N-E- of it I think for the students to make an effort they need a fun activity.
I liked the cube about the lesson.
I liked the cubes. They were fun to figure out.
I liked trying to figure out what was on the other side of the boxes.
That we got to work as a whole group.
There wasn't any writing.
My favorite was having to think about the nature of animals.
We did not have to write anything
It was fun
guess about what was under the cube (box)
I liked trying to figure out the mystery cube.
working by myself
What I like most was the new questions and explanations we came up with. It was sort of a mystery with new surprises. This lesson kept me guessing.
The way it kept leading to more and more questions.
I liked most about this lesson is how we put it together as a group and figure out what is on the other side of the boxes.
It was pretty easy.
It was kind of interesting and gave new ideas.
I liked trying to figure out the problems.
It was fun because it was like we were playing and trying to guess what was on the bottom.
I liked not having to write a book about something.
Nothing
The fact that I could understand what they were talking about.
We had to figure out things?
I liked when we guessed what was under the cube. I liked when we talked.
I liked the most that you didn't know what's on the bottom. It was kind of fun thinking what could be on the bottom.
I liked how we made a testable question and how we tried to solve it. I liked how interesting this lesson was.
I liked trying to figure out what was on the bottom of the boxes. That was making my mind think a lot.
The thing I liked most about this lesson was coming up with testable questions. It was easy to come up with them.
I liked this lesson because we didn't have a lot of homework. It was a fun activity other than book work.
The thing that I liked most about this lesson is the Mystery Cube. I like this because it was challenging to the mind.
What I like most about this lesson was that you had to think without lifting the box. I also liked that you had to figure out everything with a team mate.
The most I liked about the lesson was when we had to figure out things that we couldn't even see.
That it was a fun activity and taught us about testable questions and more.
The thing I liked most is trying to find out what was on the bottom of the box. I liked also the thing we had to do to find our answers.
The thing I liked most is the guessing, it made me think if it is right or if is not.
I liked when we started to do the investigation. I also liked the fact of working with a partner.
I liked when we had to figure out what was on the bottom of the box. I also liked when we had to look on the bottom of the box.

What I liked most is how you had to use your brain and just work really hard. Also, I like how it challenge my brain.
I liked the whole lesson because it was fun doing an investigation. I want to do something like this lesson again.
I like that the teacher's didn't tell us what was on the box till the end because it made me think and how it was a group hands on project.
I got to look at the cubes and it got me thinking. Plus, the animals and matches was fun than usual school work.
I liked how the information kept taking turns in why the children were absent. I also liked how much fun we had doing the tests. I liked working in groups.
To try and guess what is at the bottom. I like how we did it as a group.
I liked working in groups also, I liked trying to figure out a lot of information to know what was on the bottom of the box.
I liked trying to figure out what was on the bottom. Also, I liked that it wasn't the normal science class.
I liked trying to find out what was on the bottom of the biology box. I also liked working in groups.
What I liked most about this lesson was it was fun and there was no homework attached. I also liked finding out all the patterns.
I liked the mystery box. It was easy but it also made me think a little about it. It made me want to know that my answer was right. It was a good change for science. This was a fun lesson.
It was a very easy lesson. It was also interesting and made me think.
The mystery box, it was fun. I like the groups.
I liked the Biological box better than the mystery cube. I liked that it wasn't a normal class and it was fun.
I liked how you had to think (guess) about what was on the bottom of the boxes. It got me questioning new things.
I liked doing the fun hands on activity.
The most I like was that it made me think more than I usually do. I also think that the tape on it was interesting.
I liked most about the lessons was that the task was easy. The pictures on the boxes were cool too.
I liked that we had to solve the mystery of what's on the bottom of the box. I also liked that this lesson was hands on instead of just a boring verbal or written lesson.
I really like doing the testable question and working with our partner doing the examples and explanations.
I liked the fact it made me think. I like to think hard.
I liked that we had to work as a team to find out what was on the bottom of the box. We used everyone to communicate and tell what we know.
I liked the investigation the most of the two bores. This was my favorite because I got curious a lot, even on the smallest things.
I like the Biology Box the most because it was the hardest. I also like it because it was kept a mystery.
I liked the fact that we had to guess. I also liked the fact that we got to move the biology cube.
I liked that we could work as a team to try and figure out what was on the bottom.
That we had to work together to find out what was on the bottom and we still aren't sure if we're right or not.
What I liked about this lesson was all of the activity there was with guessing what was on the bottom of the boxes. I also like how the tables worked together.

I liked how we didn't get to see the bottom because not knowing what the bottom was made me think and draw conclusions.
I liked that it was easy and easy to understand.
I like working with everyone at my group. I thought getting testable questions and finding the answers to them was also pretty fun.
I didn't like much about this it was easy enough to solve right away.
The best thing was the mystery cube. It was the best because everyone found it out.
I like the investigation most about this lesson. I liked looking for patterns between the different sides. These pattern were somewhat hard to figure out.
I liked trying to figure out what was on the bottom of the box. I thought it was fun.
I liked when we got to guess what was on the bottom. I liked when we found out we were right.
I liked most how we had to investigate a little to find out the bottom. We had help investigating from some other people.
That the lesson made the groups work together like a team. I liked the fact that we had to use our minds a lot more than usual.
I liked to see a little of the bottom of the box.
What I liked most was trying to find out what was on the bottom and how to find it. Also, because we got to investigate.
I liked the boxes, made you investigate the boxes. It was Great!
I like the lesson because I liked to match the pictures with the background and to find out what the bottom picture or number was.
What I liked about this was that we can actually work as a team.
The thing that I liked most about this lesson is that we kept having to think to solve to try and figure out what was on the bottom.
I like it when we got to see a little of the bottom of the box. It had good pictures.
There was very little homework.
I liked it because it made me think better. It also made me ask better questions.
I liked how it made me think and how we liked to work together.
What I liked was when we had to figure out what was on the bottom and I was actually on task and I am usually not.
I liked this lesson because it was fun.
What I liked most about this lesson was that when we used the computers, but nothing else.
I really didn't like this lesson bit it was kinda cool being a team and solving questions. But that's just my opinion. I loved doing the computer project, I loved doing the band project.
I liked the animal box was the best because I like to learn more stuff and you can use your hands not sit and write all day.
I liked the Biological box because it made me think more and observe more than I do. It was better than the Mystery cube.
What I like most about this lesson was you got to work with other kids and help each other.
I liked it because we did not have to do book work.
What I liked about this lesson because, it was fun trying to figure out what was on the bottom.

I liked that the class worked together. Working together made the project easier and more interesting hearing each others thoughts and ideas.
I liked the fact that it made me think about things. I usually never think about and it was somewhat challenging.
The thing that I liked about this lesson the most was that we had to figure out what was on the bottom and I liked that it was a challenge.
I liked the hands on activities so you can learn easily.
The thing I liked best about this section is doing the biology box and how you get to move it.
I liked that you couldn't see the bottom so it was a mystery till our teacher told us.
It was very hands on.
What I liked most about this lesson was guessing what was on the bottom.
I liked having a class, group discussion. I like trying to solve things like this.
I liked most about this lesson is that it was fun and easy.
I liked the part were we had to think had to challenge our minds.
The thing I liked most about this lesson is that it was pretty easy to figure out what was on the bottom because just by studying it I could figure it out.
I liked most the biology box because it was fun and cool how they were the habitat and food chain of that place.
What I liked most about the lesson was matching the opposite side with the habitat and food chain. I wasn't here for the mystery cube. I liked trying to figure out the Mystery of the Biology box.
I enjoyed pushing the cube to the edge of the table and looking under.
It is fun.
I liked solving the problems like finding out what was on the bottom of the boxes.
I liked the mystery box because it was easy and fun.
I like the Biological box because I guessed the whole thing.
The boxes
The cube activity was exciting.
I liked how we could see the bottom of the cube with a mirror.
I liked the cube activity because it made me think.
I liked the cube activity.
I liked doing the cube activity. It was fun to try and figure out what was on the bottom of the cube.
I liked the cube activity & the survey.
I liked everything about it.
I liked the cube activity
I liked the cube activity
I like how you couldn't touch the cube with your finger so you had to use technology.
The thing I liked most about this lesson was trying to figure out what was on the bottom. It was fun looking at the clues and patterns to try to solve it.
That it was fun, we did not have to read much.
cube
I liked having the temptation to have to pick the box, but I would have ruined the experiment if I had.
I liked working together
It was fun and interesting. It made me think about certain things.
interesting
What I liked most was the mystery of what was on the bottom.
Trying to figure out new things.
Trying to look on the bottom of the cube without touching it.
That it involved animals.
Finding out what was on the other side.
Trying to figure out what was on the bottom.
I liked that it was a group activity and a fun one as well. It was more like a game with your friends than a science activity.
I like how we got to do a lot of experiments and when we had to figure what was on the bottom of the cube.
The suspense
I liked finding the connections between what was on the cubes.
The 2nd box was good. It was fun to try to pick out the patterns.
I like how we had to guess what was on the bottom.
The pictures were nice
I like to make up testable questions
I liked when we used the mirror to look under the cube.
I liked how we actually had to think of this as a real case & I liked how we had to see how everything went together.
The thing I liked most about this lesson was that we had to use what we could see on the cube to make a reference about what was on the bottom. This made me think scientifically.
I liked this lesson because we had to figure out what was on the bottom and discuss what we thought with our group. Then, we had to figure out a way to see the bottom without touching the cube. I like to figure things out.
I thought it was kind of fun because it wasn't exactly working but it showed inquiry.
The investigating was real.
I liked how disease spreads to another person anywhere that person goes.
I liked being able to work with our partners to try to find out what was on the other side of the cube.
I like when we have to get it what was the picture
Trying to figure ou what was on the bottom.
It kept me thinking and wondering about the unknown.
I liked how we had to use our will power and not touch the cube.
I knew exactly what were on the cubes.
How it related to life so easily
Making up predictions about what # was under the cube
The things I liked the most was the mirror part where we lifted the cube with a ruler about 1.5 inch and tried to find the thing.
I liked how we had to work together to figure things out.
The mirrors we got to use
I liked how you had to do certain directions to look at the bottom of the cube.
Using the mirrors
The patterns the cube made.
I liked that it was easy
I liked the mystery of what's on the bottom of the cube.
I liked that at the end of looking at the second cube we could find a way by using materials to look at the bottom.
figuring out the patterns & what was on the underneath side
Being able to tell people what I saw in the mirror.
Finding out what was on bottom. (Using the mirror)

All of the rules that would stop us from making the lesson extremely easy
Using the mirrors
Trying to find out what was under
It was the experiment that actually made me think.
Trying to figure out how to look under the box without touching it.
I liked figuring out how to see the bottom with a mirror when it was difficult to do otherwise.
That we got to say our opinion and thought process.
The mystery of what was on the bottom.
The boxes were neat.
The patterns
Trying to see what's on the bottom of the cube.
That it was relevant and sort of fun.
We had to use logic to find out what was on the bottom of the box.
Figuring out what the last box was.
it was fun to think up of new ways to figure out what was on the bottom.
The element of surprise.
It's better than reading out a text book.
It made me think differently than I normally do.
It was sort of interesting. It gave us a chance to use our critical thinking skills. I guess I liked the Biological Box.
The mystery & suspense
It was same
Made me think
Getting to use the mirror
When we went around the room saying the funny questions we came up with.
Make us cooperate with each other.
I don't really know I thought it was overall very interesting and I liked it.
I liked internet research
You had to use teamwork.
It was easy.
I like that it was interesting and not constantly book work.
How we had to find a way to answer our questions.
Having to work as a group to see what was missing.
It was challenging
I liked the cube activity.
It was better than book work because I didn't have to write.
The pretty pictures.
I liked trying to figure out what's on the bottom and also what position.
The inquiries and anticipation of what was on the bottom of the box.
The pictures on the box.
There was no messy procedures and tables to deal with.
The pictures.
Mirrors
Mirrors
Guessing and trying to find out the answer / results.
It was fun and it made me think.
I liked that we got a chance to problem solve. I think that I learned a lot from the lesson.
Trying to figure out the cube.
I liked it when I got to see what was on the bottom of the box.
Well, I liked how we had to come up with spontaneous ideas.
Hands on activity
Not much

Thinking
It was really easy. We got to work with a group.
It made me think.
I like working together when we have incomplete info & must combine our observations to go to a conclusion.
Finding the answer
The boxes were simple.
All of it.
That it involved the whole class, and we had a group discussion.
It had interactive qualities.
It had pretty pictures.
The questions were easy.
Getting to figure out what was on the bottom.
The animal cube!
How easy it was
We had to work together to figure things out.
It worked your mind a lot.
It was pretty easy.
Trying to guess the biological box food chain.
The pictures
I liked finding out what was on the bottom.
It was fun and you used team work.
It kept you wondering so it was interesting, you were allowed to work in groups.
I liked not being able to move it, it made it much more challenging, also, it made it fun not being able to touch it.
It made me think outside the box and it was semi hard.
I liked how you didn't have to study things or read things. I especially liked the 3 animals.
I liked how it was a "hands on" lesson.
The box
Trying to guess and figure out what was on the bottom of the cube.
I liked to try and figure out questions asked and answering questions, which made me think.
The little cubes
The kinds of things that were on the boxes
Guessing
I liked the worksheets a lot and my favorite was the crossword puzzle, word search and animal raise worksheet.
I liked working the groups.
Figuring out what was on the other side of bottom of cube.
Everyone wrote
You had to work together and you were put a challenge because you couldn't move and that made it fun.
The realizing you can't assume anything.
I liked that we got to do some of the same things that scientists do.
it made you think
I liked that the cubes had patterns and were easy to read
It made me think about things in real life.
The follow up
The fact that it was new and interesting
It was fun to find the pattern on the cubes.
It was interesting and a little bit fun.
It was a change from the other stuff we were doing.
I liked the part were we guessed what was on the bottom, after collecting the data.
I thought it was much more interesting than just reading things on the board.
I liked writing this down with your group about the boxes.
I liked that it made us think. I liked that it made us look

for patterns and come up with testable questions.
using the tools
The challenge of using tools to see what was on the bottom.
When we got to brain storm questions about the cubes.
The Biological box was hard and so it made it interesting. The tools allowed weren't very helpful, so it was fun to think about. (It was hard at a good level, not too hard or too easy)
I really liked the way the cube activity made you think about the different possibilities and gather evidence to narrow those possibilities down.
The fact that we could come up with so many questions, but with our limitations. None were testable.
I liked the mysterious thoughts come up and our science teacher kept the cube a mystery.
It was fun to come up with new questions & explanations for what was on the mystery side.
The fact that you had limitations but could use tools to figure things out.
It involved teamwork, it required us to think. It made us use logic and it also made us make more questions.
It told me what a testable question was by having us think about the questions we asked.
I liked it when we were collecting evidence to attempt to answer the testable question of what was beneath the box.
I liked most the experiments of the Biological Box.
I liked that there were patterns that helped you create a theory for what was on the bottom. This made the lesson more fun and interesting because it wasn't just random guessing for what was on the bottom.
I liked not knowing what was on the bottom of the box.
I really thought it was boring. I didn't like anything really.
We got to discuss our ideas
I liked using tools to see the biological scene at the bottom. It was fun to make hypothesis about the bottom of the box.
collecting evidence
I liked that it allowed us to go through the process of scientific inquiry.
It was good for teaching about analyzing data and making observations. It got me thinking bout what was on the bottom.
I liked how we didn't get to see what was on the bottom of one of the cubes.
Trying to figure out what was on the bottom of the cubes.
How it told what is evidence what is a conclusion.
I liked the suspense, and when we used tools for it.
I liked the activities because we got together in a group and work on them together. They were fun.
I liked how it really made us examine things (e.g. the paper cube) to come to a conclusion.
That it was so easy and we got to get in groups.
…..anything that I liked a lot.
Everything
The most activities I like was the for cube, I like this because I gave me a clue about what the future activities are going be about.
That we created a lot of questions about the boxes or cube and we took guesses & stuff.
It taught me how to investigate on a good testable question.
What I like about this lesson was that everything was easy.

It was really easy and simple.
Group work
What I like the most about this lesson is the box, not knowing what is under it.
The part when we had to figure out the missing number, and find the pattern.
I liked the cube and the experiment we had to do with it.
Using the tools on the Biological Box.
It was easy about the boxes.
The cute animals on the box. It was easy. It was like a puzzle.
It was fun
Working with my friends
It was interesting
That we had to do some experiments and finding evidence.
I liked getting to use the mirror to guess what was on the bottom of the box.
I got to see and observe things. I also learned new skills on making questions.
How we learned to make intellect remarks.
I liked trying to find different answers
Working in groups
I got to improve my skills in investigation. I learned how to read better graphs.
I liked figuring out the bottom face.
There's more than one way to explain a simple answer.
I liked this lesson because I liked figuring out what to do with the cube.
How we got to investigate the boxes.
The way a pattern was reflected on every side of the cube and we had to find the pattern.
It was cool, because we had to find out what was on the bottom and people kept on flipping it over. It was funny.
Working together, in order to find what # / shape was under.
It was fun because we shared information about the cubes!
It was kind of fun to work in groups and share our thoughts and opinions.
I liked when we had to guess or figure out what was on the bottom and the connections.
The thing that I liked the most is that we had to come up with questions or take notes to find out what the bottom number was.
I liked working with the cubes because it was fun working with my group & trying to see what was under each bottom.
Looking at the cubes, and trying to figure what was on the bottom.
I liked that it made you think about which number was missing.
I liked how we had to find out what was on the bottom of the cube without touching it without hands.
I liked coming up with the questions
How we got into groups and thought of what the answer was.
That we got to talk to each other making observations.
Biosphere
Nothing, it was boring, not challenging enough
I like how we were put into groups and from there rely on ourselves and our group members. This lesson was based on teamwork and asking questions.
When it was almost over and we compared the activities.
The boxes showed us what cycle it was, #2 is missing

and the animal food chain.
The thing that I liked most about this lesson was how we couldn't touch the cube with our hands but with other things like mirror.
I liked the cubes, because we had some interesting observations.
I found it interesting with the way we had to find patterns on the cube.
The reason was because we got to share our ideas with other members.
It was not very hard to understand.
I like to work as a group and learn from others, and doing stuff observing cubes were interesting and fun.
We all work in a group and say what you thought
Conducting a scientific investigation
I liked the mystery cube thing.
The investigations.
About asking question to find out what was the other number and the evidence around it.
The thing I liked was nothing.
The prediction of the Mystery cube and the Biological
Is the cube with the animals for their food chain.
I enjoyed the fact that we couldn't touch the cube, so we used technology as in mirrors, pencils and paper to see all the sides.
How easy it was.
It wasn't hard for me to do the lesson.
discussions in class.
The part when we observed and found patterns.
I liked recognizing patterns the most.
I liked surveying and reading over the graphs.
I liked the different questions.
What I liked was when we observed a lot of the parts of the cube.
Looking on the two cubes and observing them to see our knowledge in inquiry.
I liked looking at the cubes and observing them.
What I liked most was to work as group.
The cube and pictures and working in groups.
I liked this lesson because you can share your ideas.
This lesson was mysterious and I liked that a lot.
When we talked about stuff
It was fun I liked how we kind of used the scientific idea that we used to figure out things about the cubes & how we took a challenge.
the fact that it made you think outside the "box"
I liked the mirror when you put it under the box.
Observing and discussing about the cube.
Figuring out where the students all went and go sick
The activities
It was easy.
Trying to find out what was on the bottom of the cubes
The inquiry we did, it was like a mystery and I love mysteries and I "love" to solve them too.
What I liked was that it wasn't that hard or easy.
I don't know
The fact that you have to find patterns so it was challenging.
The thing I liked the most was the memos. The memos helped my partners and me understand if we were right.
It was interesting in learning about patterns and relationships between pictures.
I liked that we had to gather the information
Being in groups.
Putting the mirror under the table to find out what was on

the bottom.
That I was able to make testable questions.
All of the experiments
It was easy because we worked in groups.
I liked how we observed things and made predictions (with questions).
When we used mirrors and pencil to see the cubes bottom.
The most I liked about was that it was a mystery, because no one knew what # was on the bottom.
The inquiry cubes
I like that we had to use the cubes to find out what was on the bottom
It made me think of new things, I just didn't get the easy way out.
Working in groups & observing the different boxes.
Working with all the things.
The questions & what we where looking at to answer the questions.
I liked that we had to talk about it and discussed it all between us.
The graphs of where people was going.
What I like most about this lesson was the mystery cube and the biological box.
It was simple. (The lesson)
Well the fact of using things we're familiar with.
I liked the questions and how people think, but we all just got the same conclusion.
I liked that we could only observe the cubes but not actually touch them, which was interesting since you had to guess what was at the bottom of the cube.
What I like about this lesson was that it was fun and we had to make observations.
Trying to figure out what was on the bottom of the cube by looking at patterns.
I liked the easy cube activity
Good to read
The animals and lions
Searching
I liked when we my group had to figure out what was on the bottom of the cube.
It was interesting
It made me think
Trying to find out what was on the bottom of the # cube & see if it was right
I liked the part where we had to make observations and find evidence and predict and finally the answer gets me excited.
What I liked the most about this lesson was the way we had to guess what made the children sick and why they were absent.
That we couldn't touch the cube.
I didn't think this lesson was very interesting
You had to guess
The dice was exactly similar to the dice.
It was fun, I liked it.
The maps
It was fun.
I liked trying to figure out what the missing piece was.
I liked how we could try out experiments without having to be hands on. We found out how to test stuff on paper.
It wasn't that hard, and it was sort of fun.
We tried to use our minds instead of our eyes in trying to discover what was on the hidden side of the cubes.
It made us think, and it used science & math together.

I liked how we had to do an observation to see who missed school and try and find out how and why?
I liked that it made you think about it, instead of just giving the answer away.
Trying to figure out what was underneath the cube with the mirror.
I liked the fact that two of the opposite sides were always equivalent to each other the most.
It wasn't that hard.

Trying to solve if there was a Health hazard.
That you have to think about it and it was okay.
It required some type of thinking and observing evidence.
It was fun and interesting!
It was cool, because we had to find out what was on the bottom and people kept on flipping it over. It was funny.
It was very interesting.

What did you like least about lesson 1?

If we touched the cube we got into a lot of trouble
It was really boring
We couldn't touch the boxes and we could not move
You couldn't touch the cube
It was time consuming
Reading all the cubes to papers and all the other stuff
Not being able to touch the cubes
I hated being asked what was under a box. It sounded kind of wierd
That we did not get to find out what was on the bottom of the mystery cube.
That it was ok
That we could not touch it
Having to talk in fron of the class.
Not being able to touch anything.
If you touched the cube you got sent out in the hall.
Nothing
That we could not touch the box.
I couldn't find some of the info. And some were pretty hard.
We could not touch it.
How the cube was glued to the plate.
It was a little hard because we didn't really know what we were doing since it was the first day.
I couldn't look and see what was under the cube.
It was easy.
Not being able to move around.
The 2nd cube
That we were not allowed to know what was on the bottom.
Not being able to touch it.
You could not move the box or touch it.
Not being able to turn it to see the other sides.
The cube thing
We had no choice over it
I wanted to touch the box.
That you could only have 4 graphs on your screen at a time.
It was a little boring.
A lot
That we could not touch the cube.
It was a little too easy for me.
Lending all the attendance data.
It was kind of easy.
Not being able to see what was under the box.
It was too easy
We only got a little time to do it.
The group I was with made it seem harder than it really was.
You had to think a little harder than usual.
We were not able to touch the boxes.

I do not like how hard it was to do the work.
That we did not get to see the answers on the number cube.
That you could not touch the cube at all.
I did not really like not being able to touch things
Waiting to get started
That it has anything to do with science
Using the "technology"
Sort of easy
The cute and plate, I think it should be something else
Nothing, I thought it was fun.
Having to read out loud
The dice part, we all knew what was on the bottom.
I did not like it when you can't even touch it.
You had to think
Nothing
I did not like making up scientific questions
I did not like that we had to use not so up to date techonolgoy.
I did not disliked this lesson
It was kind of dumb that we could not even touch the plate that the cube was on.
Not being able to see what was on the bottom of the first cube.
Lesson 2: Ex: How is human blood different from Bug's blood?
Everything
I didn't really understand testable questions.
It wasn't challenging and it was boring.
Biological box
I liked it all.
Testable questions.
Finding things
That we could not look at the bottom of the cube on the plate.
Writing testable questions
Not being able to touch it.
Biological cube
I didn't learn anything
That we did not get to see what was on the other side of the cube.
Not much
It got annoying
Doing work
I disliked the part were you could not slide the cube to see the other sides.
What I liked the least was that the images at times were hard to see
That you had to describe a cube.
I didn't like how we could not touch the cube. That really bothered me because I kept on wanting to pick it up.

I didn't like the part were we had to use a nail file and mirror to look under the cube.
Writing the evidence you collected.
We were not allowed to touch the cube or move it so, I could not see what was on the sides of the cube facing the other direction.
Some of the graphs and tables were poorly done.
One of my partners cheated, so it was no fun.
The biological project was kind of boring.
I didn't like the mystery cube a lot. It was hard to understand.
You could not touch the box.
That at first, I didn't understand what they were asking us but then I got it.
That it was stuck to a plate
You could not see the bottom
Not touching anything
That you couldn't touch the cube
I didn't like not being able to touch the cube
Too easy
That you couldn't touch the cube or the plate.
Not being able to touch the cube.
The part were we could touch anything.
That we weren't able to get it done in one day.
That you couldn't pick up the box.
Not being able to touch it.
It didn't give enough info.
It was a little bit confusing and hard to come up with just one answer we thought was correct.
Not being able to know what was on the other side or bottom.
That we did not get to see if we were right.
I don't like cubes
Not sure
How to figure what was on the bottom
Writing things down
Nothing, I liked it all
It was hard to think of new testable questions at times.
We couldn't see the bottom on the mystery cube.
The little info we had
Not knowing what was on the bottom
Little boring
how long it took
You couldn't move.
That we couldn't see the bottom of the cube.
Describing everything
We never got the answer
It was a waste of time
That we couldn't look under
It was hard
We didn't have enough time to think it through all the way.
It was easy
I liked to be independent, and I tend to not like being proved wrong on my answers.
It was boring
I thought that it was hard to find what was in the bottom of the Biological Box.
It got a little confusing.
I thought the second cube was a little bit too difficult.
It was irritating.
It was kind of hard until you understood it.
we didn't get to find out what was on the bottom

that we never found out what was on the bottom
There was nothing I really hated but I didn't like how it was boring (in my opinion)
I didn't know for sure what was on the bottom of the cube.
I didn't like the whole lesson
It wasn't that exciting but it was pretty informative.
That we didn't have more to do it was kind o f easy
having to come up with the questions.
I liked it but maybe if there were a couple more cubes to solve it would have been more fun.
she made me sit where I didn't want to
That we couldn't move around
It went by very fast
not being able to move or touch it
Not being able to touch it.
It was a little boring.
everything but the guessing part
It was not interesting at all
doing some of the work sheets
I really enjoyed this lesson, there was nothing I didn't like.
the group did not do anything
It was rather boring because it was pretty easy.
we had to write a lot
Not being able to touch or flip the cube.
Not being able to move
My group
It was a little easy but ok.
We (as a group) did not understand each other real well.
It was a little easy
It wasn't that interesting.
too many papers, we got behind fast.
The form of the main work sheet
that we couldn't see the bottom.
It was too easy
We couldn't move the box
We were not told if we were right
We never really saw what was on the bottom
It was kind of boring.
When we had to write down what we saw, but then again it helps to remember.
There was nothing to do really. You just wrote what you saw & talked to your partners. It kind of felt like we were back in 3rd grade or something.
It wasn't very fun
The reading
It was easy overall
Nothing was bad about this because after figuring it out in a minute I could talk to people.
We never got to see what was on the bottom of the # cube and we had to record things, I don't like to write too much.
It was kind of easy.
Of coarse the work
It was easy
I didn't like the Mystery Cube it was too easy.
It was hard to read the tables with the students.
Kind of boring at times
everything - it was boring and pointless
Not being able to know what was on the bottom.
information was confusing at times, sometimes second guessing itself
That worksheet
It was a little hard

All the work
It was all ok
there might not be 2 on the bottom it could be a 77
it took a long time & became quite boring
It was boring
I don't think I had anything to dislike or like the least in this experiment.
Too easy
I liked the lesson.
The confusion of having to explore other possible answers.
we couldn't find out for sure what was on the bottom.
There was nothing bout this lesson I didn't like.
All the people getting sick.
It was just really too easy.
There was nothing I didn't like.
Nothing I guess! Are we couldn't get up.
that we couldn't stand up
I didn't like when we couldn't look under the box.
There was nothing about the lesson I didn't like
The writing
You couldn't talk
We couldn't get up during lesson 1.
I liked this whole lesson.
I didn't like to write.
We couldn't move or look under the Biological Box.
There was nothing about the lesson I didn't like.
I didn't like answering questions in this lesson.
That there could have been varied answers.
There was different things that I liked but I don't know about disliking it.
Doing it.
I have nothing to say.
I liked everything.
I did not like that I could not touch the box.
I didn't like that we couldn't see the other sides and that we couldn't touch the box.
There is nothing I didn't like about it.
I really liked the whole thing it was nothing I disliked.
There was not anything I did not like.
There's nothing I did not like least about this lesson.
There wasn't anything that I didn't like
I didn't like not knowing the mystery.
couldn't see the other sides
I did not like the way the lesson was taught. I would rather do real experiments and test to find answers.
I like least about this is the whole point of doing this.
You had to think.
You had to think a little more.
I didn't like not being able to see underneath the box.
I didn't like anything least about the lesson.
I did not dislike anything in the lesson.
Everything
I least liked the big words, I could not understand.
We could not see the other side of the box.
I didn't like the part when we had to push the box of the table and I don't like the project really.
Then on the other hand, I didn't like the lesson because you couldn't look at what's on the bottom, but eventually we found out.
I didn't like the suspense, I didn't like how we had to search.
I didn't like when we couldn't find out right away what was on the bottom of the box. That was making my mind wonder.
The thing I liked least was nothing because it was all easy and interesting, nothing was hard to me.
There was a lot of information that was confusing.
The thing I liked least is the Biology Box. I liked this least because it's material was hard to understand.
What I liked least about this lesson was that we had to work with a team. I would have liked it more to work with only one other person.
The least I liked about this lesson is that we had to collect a lot of data and it was a little bit hard to find out what was at the bottom of the cube.
I thought it was way too easy. I think that you should make it harder.
I didn't like the one were we had to find out what number was on the bottom. It didn't make any sense at first.
I wouldn't know, I didn't dislike anything, they were all fun.
I didn't like writing inside the little boxes. I didn't like doing the homework.
I hated when we had to write what we saw. I also hated when we had to talk about what we saw.
The only part I did not like about the lesson is how you had to figure out why your answer was correct. I also did not like how you have to work with other people because they were loud and told people what you and my teacher said you can only tell your partner.
The only thing I didn't like was getting curious and anxious about not knowing what the answer was.
I did not dislike anything. I only thought the worksheets was difficult.
I didn't understand the lesson at first and I kind of got stuck on trying to figure out what the bottom cube could be on the animal box.
I did not like how we could not see what was on the bottom of each box. I also didn't like how we could not move the box to look at the other sides.
I loved everything about it. There is not one thing I hated/disliked about this.
I didn't like knowing what was on the bottom.
I didn't like not knowing what was at the bottom.
I didn't like how we didn't get to see what was on the bottom. I liked everything except not seeing the bottom of the mystery box.
What I disliked the most was I couldn't see the bottom. I also did not liked the hard part of figuring out everything.
I didn't dislike this lesson. I thought it was fun! It was something different, it was a change.
There wasn't much that I didn't like.
I didn't find the bottom out for awhile. It was hard.
I didn't like not knowing what was on the bottom. I also didn't like how you need to use the prob for the biological box.
How you couldn't touch the box (move it). I didn't like it because I'm used to touching everything that I have to guess about it.
I didn't like having to wait to get or look at the bottom of the two boxes.
The least I liked about this is because we didn't see the bottom. Also, when it was done we didn't see the bottom.
I did not like that in the end of the questions with the band being sick we never found what caused their sickness.
I didn't like that we didn't get shown what's on the bottom of the box although I figured it out. I also thought that this

was way too easy.
I really did not like nothing least about lesson, both of these were great because I learned something and I had time to think.
I did not like I wasn't shown the bottom. I happen to like to be shown whether I'm right or wrong.
I didn't like that the box was taped down to the table. I wanted to pick it up. I couldn't because we couldn't touch it either.
What I disliked the most was not being able to see the bottom. I knew the answer but my curiosity was killing me and I needed to see it.
I didn't like the mystery box. I think it was way too easy.
I did not like the fact that we could not see the bottom of the mystery cube. It was unfair not to be able to push it around.
I didn't like that we weren't able to see the bottom of the box.
The fact that we didn't get to really find out if we're right or not.
What I least liked about this lesson was not getting to see what was on the bottom of the box right away. Also, from where everyone was sitting, you could only see 3 of the 5 visible sides.
I least liked the how the box wasn't allowed to be touched.
I didn't like that we didn't get to see the bottom of the boxes.
I didn't like not knowing what was on the cube. The project really made us think of different patterns and colors.
This was an easy lesson to do and it was easy to solve.
The worst was also the mystery cube because everyone thought they knew it but we weren't shown it.
I didn't like not knowing what was on the bottom of the box. I wanted to know whether I guess right or wrong.
The part I liked least about this was when we figure the 2 was shaded in back on the bottom but we weren't told till the end.
I didn't like when we didn't get to see what was under the box. We had to wait a long time. I don't like to wait.
I didn't like how we couldn't see the bottom. Not looking at the bottom was very hard to do.
That we weren't shown the bottom of the box after we made our guesses. Other than that, the lesson was enjoyable.
I did not like that I could not see the bottom of the box.
I liked it all and thought it was great but, I would have really liked to see what was on the bottom.
I didn't like how our teacher did not show us the bottom of the boxes!
I didn't like that we didn't get to see the bottom of the boxes.
What I disliked is what was on the bottom.
The thing that I did not like about this lesson was mostly all in general. I do not really like this sort of scientific investigation. I like DNA and forensic science.
I didn't like that we couldn't look at the bottom of the box. I was impatient.
I did not find out what was on the bottom of the cube.
I least liked the part when we couldn't touch or see the bottom. I also disliked the part when we didn't see the other side.
Don't like how we couldn't see the bottom of the box.
When my teacher did not show us what was on the bottom. I still want to know.

What I like least was that I did not like the lesson at all, but it was ok.
I didn't like the boxes really. I think it was kinda boring and it made me want to go to sleep.
I did not like the end of the sickness, I wanted to know what happened.
I didn't like to wait to see what was on the bottom of the box. I really wanted to see what was on the bottom of the box.
What I did not like was we did not find out what was on the bottom of the boxes.
Working and you can't see the bottom.
I did not like the writing.
I didn't like the fact that it wasn't very hard. I thought the project would have been more interesting if it was more challenging.
I didn't like the fact that we didn't get to look at the bottom of the cube even though we had answers we thought were right.
I didn't like anything, but I didn't like that we didn't know what was on the bottom.
I think you should have made the habits a little more clear so you can tell what the habit is clearly.
I liked the least about the section is how we didn't get to move the mystery cube.
What I liked less was writing questions and answer questions too.
We did a lot of writing.
What I liked least about this lesson was not knowing what's on the bottom.
I wanted to find out what was on the bottom of the cubes right away.
We couldn't see the bottom of the mystery cube for awhile.
I didn't like not knowing what was on the bottom of them or knowing what caused the unusual absentees.
There wasn't really too much I didn't like about the lesson because of how easy it was.
I least liked the mystery cube because it was too easy and also I didn't like that we didn't get to see what was on the bottom.
What I liked least about this lesson was the homework for the lessons.
I didn't like the written work very much.
The writing part
I thought this lesson was kinda boring. I like the lesson after this.
I noticed that some of the food chains were backwards and I didn't get to see the bottom when we thought we had the answers.
The food chains are backwards
I didn't like not being able to see the bottom of the boxes.
What we had to do to look under the cube.
It was too suspenseful. We didn't know enough about the cube.
I hated the survey because some of the questions were hard to understand and I didn't know some of the answers.
I least liked the homework.
I didn't like that we couldn't see the bottom of the box.
The thing I liked the least was the homework.
We didn't get to see the bottom of the cube.
The homework, why we couldn't look at the bottom of the cube, why we couldn't touch it.
The homework

I didn't like how we only got to look at the bottom of the second cube but not the first.
The thing I least liked was that Mr. Molley wouldn't let us see what was on the bottom.
Mr. Molley would not let us see if we were correct or the first cube.
not being able to touch cube or see bottom
I did not like that we could not look at the bottom or touch the cube at all. I thought it was still fun and interesting though.
I wish I could have gotten more out of this lesson. I did not learn much. The cube activity was very easy. A good idea for this lesson is to make it a lot more harder and make us infer and us detective reasoning.
I could see the bottom of the cube or touch the cube. It made me wonder.
boxes crudely made
What I didn't like was not being able to see the side of the box facing away from me. If I were able to see the other side, I could of made a better prediction.
Not being able to figure it out so soon.
Not being able to touch the cube.
That it was easy
The lack of fun it was.
That we couldn't touch the cube and that we couldn't see what was on the bottom.
The last thing I like was having to do that paper we had to do.
The patience
Waiting to see what was on the bottom of the cube.
The first box was too easy. Everyone immediately knew what would be on the bottom.
We had to guess what was on the bottom.
I really didn't think this lesson taught me anything.
I like all things of this lesson
That we couldn't touch the cube.
I did not like the way they had put the information a lot in scientific words. I would like it a lot better.
The thing I liked least about the lesson was having to make questions about the cube. This was hard to do.
I didn't like how we had to use cubes because we had to stay at our table and I like moving around.
I couldn't touch the box to turn it over.
The homework, but I did it.
I don't have a reason about disliking this lesson.
There was nothing I didn't like.
I did not like when we have to work in groups.
We could not see the first cube.
It wasn't as fun as it could be.
I disliked the fact that if you dropped it you couldn't pick it back up and start over.
People like "Sam Weeks", really disagreed with me ("Disagreements")
The reading was a little confusing.
that we couldn't know what was under the cube
We could not look what was on the bottom
I didn't like how we didn't get to find out what was on the bottom of the number box.
The fact we couldn't see the bottom
I did not like that we had to do this in groups.
Not getting to look at the bottom of the cube.
That we couldn't look at the bottom.
I didn't like this because it was boring.

I least liked that it wasn't very interesting.
I like least that we couldn't find out why we couldn't find out what was on the bottom of the cube.
not figuring out what was on the bottom of the Mystery Cube
How many people disagreed with each other.
Talking about the questions
Not being able to see the other side
Not being able to touch the cube
We could lift the cube.
We never found out what was on the bottom of the mystery cube.
It was kind of boring.
I guess that I didn't like the part where we were discussing different way to reveal the bottom of the box. I wanted to get straight through the experiment.
That we couldn't pick up the box.
The fact you couldn't touch or blow on the box.
It was all really easy.
The extreme easiness
Not knowing what's on the bottom.
How difficult and stretched out it seemed.
We didn't get to know what was on the bottom.
Nothing. I thought it was fun.
As an 8th grader, I thought this experiment would be fun for your younger students.
It seemed a little immature, but still good all the same.
As an 8th grader, I feel far beyond looking at a box and wondering about what is on the bottom.
I didn't understand the reasoning to the lesson. I don't understand it.
We knew everything already, so it was kind of pointless.
That we couldn't solve it, the way we wanted to
It was slightly boring
Not knowing what was on the bottom of the cube.
Not being able to move out of your seat.
I liked it all about the same..
Not moving, I'm very curious about all the other sides I couldn't see.
I did not enjoy having so much time get out.
You never got to see under the number box.
It was unorganized
I didn't like that there was so little information.
It got dull.
It wasn't very exciting
It was hard to do because the members of my group were cheating.
It was quite boring, seems to drag on forever.
The fact that we couldn't look under the box.
I didn't like finding out what's on the bottom of the numbered cube.
I didn't like not touching it.
The fact that we couldn't see what was on the bottom.
To make the first box more
The anticipation to see the bottom of the box.
Can pick up first cube
Don't pick up the cube
Not seeing the answers.
It made me anxious-what was on the bottom?!
We didn't get to find out if we were right! However, I did get the lesson, that some questions would never have an answer.
Not knowing what was on the cube.

I didn't like it when I couldn't see what was on the bottom of the box.
I'd like to have worked with something a little more interesting than a box.
Simplicity
Not knowing what was on the bottom of the number cube.
I was frustrated because I couldn't find the answer. It was sort of childish.
It was too easy and childish
I liked it all, it was fun.
It was confusing with it's concept.
It was too easy.
None of it.
That the experiment seemed kind of pointless and stupid.
It was a little childish. I'd suggest a more mature structure.
It was boring, I think 8th graders are beyond this lesson.
We couldn't speak to table mates.
Not being able to touch the cubes.
Working in a group
We got frustrated with each other.
We could only scoot it half way of the table.
We couldn't touch it
I didn't like asking questions because we couldn't think of a lot.
It drives me nuts when something is a secret, but it was fun.
The first one we couldn't find out what was on the bottom, but it was still fun!
The fact we couldn't move and the simplicity of the numbered mystery cube.
I just really liked it all.
Not being able to see the bottom.
Nothing really, I thought everything was great.
Not being able to touch or move the cubes and see what was on the bottom.
We couldn't touch the cube.
That you could only extend the box of the table 2 cm.
How easy it was
I liked everything, but I would have to say the observation.
The suspense of what was under the cube.
Nothing
You can't pick up the box
You couldn't finally see if you were right or wrong on your guess.
I was a little confused by all of the discussion about what we thought was on the bottom, because it seemed to be irrelevant in a way.
It was surprisingly challenging.
It didn't teach me too much
I found the lesson kind of boring, and a little too easy for my liking. I didn't have to think very hard.
The easiness and predictability
The fact that we did not get to find out what was on the bottom
I want to know what is on the bottom of the numbered cube.
I did not find any point to it.
The test part at the end.
Not being able to see what was on the bottom of the cubes.
I did not feel any personal objection whatsoever.
We never got to find out what was on the bottom! We couldn't use tools to help us see what was on the bottom.
I didn't like that we couldn't move around. It was difficult to get a picture of what some of the other sides were, just by having your group explain it to you.
the limitations for the tools
It was too easy. Guessing the numbers & animals was obvious.
That we were only allowed to lift the edge of the cube.
The number cube was too easy because it was like a die. For us the bottom number was two, and I knew that it was two RIGHT away. I suggest making the cube different than dies.
I didn't really like the number cube activity. I believe a more challenging example could be used.
On the Bio-box; the fact that we could only lift it up a half of a centimeter.
What I liked least is that we didn't get to know what was under the cube after all the work. But eventually we got to know what was under.
The strict rules for the activity.
I didn't like that we had to use a small mirror, a tongue depressor and could only lift it up a couple centimeters.
Everything was interesting and I didn't really disliked it anywhere.
I liked lest making observations on each box.
I didn't like that we couldn't actually figure out what was on the bottom. Although we could use tools, they didn't really work.
Everything it just was boring.
That we couldn't see what was at the bottom of the box.
It was much too easy. We never found out what was at the bottom of the box (number)
should have let us create hypothesis for box # 1, should have shown bottom of box # 1 and instructions for using tools should have been clearer
The patterns were kind of easy.
It was a little easy, there wasn't much effort involved. All you had to do was observe.
I liked the lesson a lot and there wasn't anything I particularly disliked.
Not being able to figure out what's on the bottom.
I didn't like how this lesson was so easy, and it became a little bit boring.
It was annoying not to know what was on the bottom and those things kind of haunt people.
We had too many worksheets to fill out.
We couldn't move the cube, and we had to write down every little thing about it.
That it was so easy and didn't really challenge us, it was just fun.
I didn't understand about the mirror.
The least thing in this lesson was the activities about the graph, I say this because it wasn't really helpful, and I think it was a waste of time.
It was just easy.
I liked everything.
The work
That there was only one or two types of evidence given.
I didn't like writing
Didn't have anything I didn't like.
It was fun.
It was a wee bit boring.
Not that fun
Everything
The place where we had to find the questions.

There was nothing I didn't like about this lesson.
There was nothing least favorite about this lesson.
I didn't like the topics but they could have been various topics.
The questions
There was nothing I liked least about this lesson.
There was nothing I liked least
It was too easy
I did not like anything about the lesson.
We were not able to find out what was on the bottom on our own.
It was kind of boring.
Nothing, I liked it all
Having to look through so much information and making so many connections.
When we found out that we couldn't touch the box.
I liked everything about the lesson.
That we have to write questions on piece of paper.
It wasn't very fun.
The time I didn't understand why we were doing it.
Having to write down the question
The students got out of control and was loud.
The cubes
Everything, it was boring in every way.
The thing that I liked least about this lesson was that we couldn't see what was on the bottom.
When we had to list certain types of questions.
Everything was cool
I least liked some of the worksheets.
Nothing really
It was not interesting. All we really did was look at a cube.
I liked everything.
We the group have to say to the class
I didn't like the biological box.
Not sure
The whole Mysterious part and it was stupid.
The absent in Schools.
The time we could pick the cube up.
I disliked nothing in general, but some aspects of this lesson were less auto dictated than others. The most crucially boring part of this lesson was when we had to wonder / guess what number was under the platform.
How boring it was.
writing on all the worksheets.
Nothing, it was all …
What I liked least about this lesson was answering the questions.
Reading over the maps, and working in some groups.
I didn't like….
When we had to write down the evidence.
Nothing, I liked it all it was interesting except the nature cube.
I did not dislike anything.
What I liked least was we did the same thing twice (2 cubes) so it was boring.
Didn't like how we could not touch the box.
Nothing
I didn't understand what the cube and the box was representing.
When we had to listen
I didn't like it wasn't enough challenge
Having to put little bits & pieces of the puzzle together.
That we couldn't touch the box, cause people still touches it.
It was too easy.
The maps
Writing
It was really easy and there seemed to be no point
The writing
To tell the truth, I actually liked everything about this lesson. It was fun working as group. Discussing different explanations and etc…so I liked everything about this lesson.
What I liked least about this lesson is that there are some questions that were hard to understand.
The unorganized graphs
The biological box was kind of easy.
The least thing I liked was not having our own pieces of information. Sharing wasn't easy.
That the lesson was very vague and short.
We had to make up question
The examining block part
All the different patterns.
Going through the info
All the different handouts
I thought it was good, nothing because it was fun and I learned a lot.
We couldn't touch the cube.
The least I liked about was it took a lot of time to find which # was on the bottom.
Making questions
There really wasn't anything I didn't like, I thought it was a good lesson.
Writing everything down.
Answering the questions.
In the beginning where we had to make questions.
I think I like everything about this lesson.
It was too easy. Maybe something that makes you think a bit more.
The fact that it wasn't really challenging.
Answering the questions.
I didn't really like figuring the connections on the cube, since it was kind of hard.
The least I like about this lesson was writing all of the stuff down.
I did not like writing out everything
The lack of animals
Write notes
I don't think there was anything that I least liked about this project.
we had to write a lot
It was a little too easy
Not touching the biological box
It was easy
What I like the least was writing everything down because there were a lot of things.
The thing I liked the least was guessing what was the # on the bottom of the books.
everything
It was work
The fact that we could only put the box over the edge 1/4 of an inch.
I didn't like the part when we had to write our own questions into a problem.
The # chart
It was too easy.

The inch thing were we could only lift it up certain amount because you could only chose one corner or something.
Writing the questions
writing
There could be more action, like the lesson was a little boring.
I liked it all.
I liked the Biological box more because it had the pictures. The mystery cube wasn't as fun because you had to add instead of figuring out the habitats and the possibilities.
It was too easy.

What I liked least was probably looking graphs and doing nothing.
I didn't like that we only used a paper box.
It wasn't that fun
When we had to know what was on the bottom of a cube using a mirror and our minds.
I didn't have a least in this lesson.
Was not very deep in investigation
line
Moving the cubes.

Lesson 2:
Working With Questions

Lesson 2: Teacher Results

Table 15.
Lesson 2: *Working With Questions* General Questions

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The lesson contained an appropriate amount of content.	0	0	11.1	11.1	55.6	22.2	4.89	.93
2. The lesson promoted thinking, inquiry, and study skills.	0	0	0	22.2	55.6	22.2	5.0	.71
3. The lesson was engaging (that is, it got students more interested in the science content).	0	11.1	11.1	44.4	22.2	11.1	4.11	1.17
4. The lesson took an inquiry-oriented approach.	0	11.1	11.1	22.2	33.3	22.2	4.44	1.33

Comments:

This lesson went much better than yesterday. The students were very intrigued by the questions in Activity 1 and we spent a lot of time discussing student-generated questions and whether or not they were testable. If they were not testable, how could they be changed so they were testable? The students did an excellent job.
Good lesson! My students enjoyed developing "good" questions, but sometimes became more focused on answering the question rather than determining the "quality" of the question! This is not a problem, however, simply an added bonus!
This lesson was difficult for my students. They had a hard time identifying testable questions. They had trouble with the worksheet. Some of them even tried to answer the questions because they thought the questions were already in testable form. Mostly the above error is because a lot of students have difficulty following instructions - an ongoing challenge for me. I thought the instructions were very clear. As we progressed through this lesson, they got much better creating questions.
The lesson was a bit less engaging as the last, so students seemed less interested.
They had a hard time with coming up with "testable" questions. I had to really work hard on this lesson.

Table 16. Effectiveness of Lesson 2: *Working With Questions* Materials in achieving Learning Outcomes

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	*Standard Deviation*
1. Students should be able to ask questions that can be answered through investigations	0	0	0	22.2	77.8	0	4.78	*.44*
2. Students should be able to formulate their own scientific questions and identify the type of evidence needed to answer them.	*0*	*0*	*0*	*44.4*	*55.6*	*0*	*4.56*	*.53*

Comments:

The materials were extremely effective, but again, I couldn't circle strongly agree yet because not all of my students would be able to do # 1 and # 2 equally well. I believe they still would need more practice to develop testable questions and to come up with their own scientific questions. I divided my students into groups of 2 students as they seemed better to focus. I asked the students to come up with 2 testable questions for all the questions so they would have more practice.
Although I think the students were fairly successful at achieving the intended outcomes there maybe a better more engaging way to get to these outcomes. I can not think of how that could happen but this was, by far, the least interesting day for most of my students. I wonder if we could give them some investigation examples and have them determine the testable questions that the investigations could be answering - just a thought. I did have a few students that liked this day but they were in the minority.
Students had a tough time coming up with the evidence needed to answer this questions - took lots of discussion & redirection.
Sometimes difficult to keep students focused on the question aspect, and not on the investigation aspect. Everyone wanted to tell about their experiment! Most questions required repeated emphasis on the format of the question. 6th grade had a more difficult time than the 8th graders.
My students quickly picked up the idea of this lesson, though some felt it was "unfair" they got the questions about which they had no prior knowledge…of course that was just normal middle school whining!
Though I reviewed criteria for testable questions before asking them to create them on their own, students were not always flawless in creating "good" questions. They were fin after further investigation.

Table 17. Effectiveness of Activities in Lesson 2: *Working With Questions*

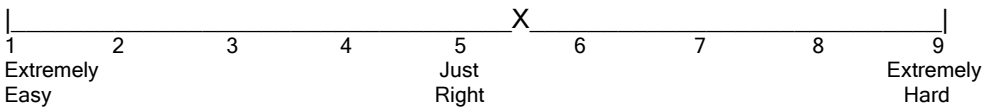
	Very Ineffective 1	Ineffective 2	Mod. Ineffective 3	Mod. Effective 4	Effective 5	Very Effective 6	Mean	Std. Dev.
1. Overall, **Lesson 2: Working With Questions** was	0	0	12.5	25.0	25.0	37.5	4.88	1.13

Comments:

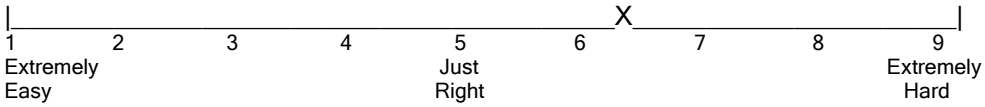
I have one student in my 2nd class who really has not been engaged in class this year. But this lesson really lit a fire under him and by the time we reached activity 2, he was coming up with testable questions, devising a survey and walking around the room asking other students questions from his survey.
I think this has the wrong title! This lesson was difficult to get through for me. I tried to guide my students but they struggled with this somewhat. I used the prompts from the directions and we managed to get through it together.
Great introduction, especially with the boxes (as a lead-in). It will take additional time for students to really be comfortable with this.
Not sure if students really understood the reason for lesson.

Lesson 2: *Working With Questions* Difficulty for the Student as Rated by Teachers. The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.

The lesson 2 difficulty mean = 5.44, std. dev. = 1.13.



Lesson 2: *Working With Questions* Difficulty for the Teachers (i.e. preparation, delivery, etc.). The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 2 difficulty mean = 3.89, std. dev. = 2.26.



Comments:

In my 1st period, I ran out of time to do Activity 2 as I didn't realize to move students right along. I assigned Activity 2 as homework as I thought it would be an extremely appropriate extension of what we had accomplished in class. Due to an unforeseen interruption in our schedule today, 30 of the students in 5th period had an abbreviated version of the lesson. The students came up with 2 testable questions for 1 of the questions and we discussed them. They too were given Activity 2 as homework so I'll wait to see how they do.
The students did a pretty good job creating testable questions on the homework assignment. Most of them chose the Quick and Tasty segment or the Loud Music paragraph. Only a few made questions on the vitamin C option. They had some pretty creative investigations. I think they enjoyed the activity even if it was homework - they never like that. This was the weakest part of the unit but the mystery cube and biology box were so fun and interesting that it was tough to follow it with this slower, less exciting lesson. Maybe we should start with this and work up in the excitement?! It is supposed to be the Explore part of the 5-E model and just didn't seem like an adventure.
Most students "got" the idea of good, testable questions. Some of the lower level students had a very difficult time with the concept.
While the list of questions supplied were very interesting to the students (ex: bug blood, etc.), they were difficult to write questions for. Some students got lost in how they would do the experiment, instead of how to write the question. The 3 different editorials were confusing to switch back and forth between ~ I will probably pick one to work on at a time in the future.
Students who are perfectionists (common at a gifted / talented) have a difficult time understanding why their questions aren't testable….this was partly due to my presentation of the lesson. Later classes, I made it more clear what we were looking for and it went smoothly. Defining that a testable question should be somewhat limited, not overly broad, was very important factor in the success of this activity. Page 47 # 2 "on the board on or an overhead"
Even after the lesson, I still felt students needed a little extra guidance in creating "good" testable questions.

Table 18. Total Number of Class Periods spent on Lesson 2: Working With Questions

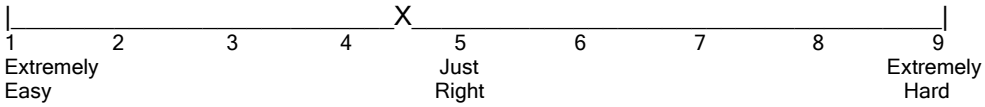
	1	2	3	4	5	Mean	Std. Dev.
Class periods spent on Lesson :2	55.6	44.4	0	0	0	1.44	.53

Lesson 2: Student Results

Table 19. General Questions on Lesson 2: *Working With Questions*

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The lesson was interesting.	5.5	11.5	15.7	31.0	28.2	8.2	3.90	1.31
2. I could read the material easily	.3	1.6	9.1	19.3	46.6	23.2	4.80	.97
3. I could understand the examples and explanations.	.7	3.5	11.3	22.8	42.9	18.8	4.60	1.07
4. The lesson made me think about new things and questions.	5.5	8.9	13.5	24.1	29.8	18.2	4.24	1.40
5. I could understand the scientific information easily.	1.2	4.8	8.1	26.1	40.1	19.9	4.59	1.11

Lesson 2: *Working With Questions* Difficulty.
The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the students to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 2 difficulty mean = 4.66, std. dev. = 1.71.



Student Comments on Lesson 2:

I really liked this lab because it really made you think
Sometimes I didn't understand things but, friends or teacher's) helped me figure them out.
I liked this because I had no homework. I understand it.
I got confused a bit.
It wasn't too bad
This was a little harder than I thought!
Challenging but not too hard
I think that I could read the paragraphs on the paper we did pretty good.
Doing the homework I learned what a testable question was, before I didn't even know what they were.
The homework was interesting.
I thought the homework directions were not clear.
I didn't like the lesson at all. We used an example of an opinion using better. (chocolate is "better" than vanilla).
I think this lesson was too easy.
I think the homework was very easy and the material was very easy to understand.
I think the homework that was given was easy and well understood.
I thought this lesson was a little interesting because I like the food chain and things like.
I thought it was a good exercise for learning how to make testable questions.
I thought it was easy and there are some not testable questions. I didn't like that we had to do homework but I liked how we got to share information with other groups.
I think that this lesson was cool. I think that it was ok.
I think it was a little fun. I like answering the questions.
I thought that the assignment was easy and I thought it was okay.
It thought this activity was pretty cool and the homework was easy.
I don't think that this lesson was interesting. I could understand the examples and explanations only a little bit, but as I was doing the investigation I came up with more questions.
I didn't like the lesson. I thought it was confusing. I didn't understand the scientific information.
The lesson was not interesting. Most of it was too easy. I think that the paper should have been more challenging so it would have been a little more interesting. I think we should have done a testable question for every paragraph.
I liked the lesson a lot, it was easy. When I did it, I really liked it.
I liked making new testable questions. I didn't like it because of the conflict on one of the paragraphs.
It was easy. It was fun.
It was easy and fun.
This lesson was pretty hard and not that interesting. I could understand most of the lesson.
I thought this lesson total all together was ok. It wasn't really my type of fun.
I thought this lesson was fun and exciting. I understood a lot so it was an easy assignment.
I thought it was interesting. It was a little fun.
I thought it was boring and didn't like it. I thought turning them into a question was boring and not fun.
I didn't really like the activity. I didn't like it because you had to keep re-reading the questions and it took awhile to think a testable question.
I thought the lesson was very boring because all we did was make testable questions. The examples were fairly easy because making testable questions and learning things were easy.
I found that the examples and explanations weren't easy to understand. I found that the lesson made me make more questions.
I think turning the questions into testable questions were fun. This was also an easy lesson.
I didn't really enjoy this lesson. I thought that it was very dull and boring. I believe that you should rethink this in the future.
I really did not like the experiment because it was very confusing and really did not make sense to me and it was very hard to remember.
I did not like the difficult of these papers. It was hard for me to make a question out of a question.
This lesson was interesting because we had to figure out why people were sick. There were different possibilities that's why they were sick.
My opinion is that the lesson interested me a lot. It helped me because I thought that it will probably help me in the real world.
I really didn't like this because it was hard. I also really didn't understand it.
The lesson was not interesting because it was more opinions on the paragraphs so it was hard. I could not read the materials because they could have been worded easier.
The question on the testable questions confused me. I thought we were supposed to answer the question.
It was fairly easy and interesting. I could understand it and I liked it and would do it again.
I felt that the reword the question worksheet was confusing. I thought it was that we had to answer the question. This lesson wasn't very fun.
This lesson was not my favorite. I don't think I was here either, but I had heard about and it didn't sound that fun.
I thought it was sort of easy. I didn't like answering and making the testable questions.
I liked this because it really made me think. This was overall a good lesson for us kids who needed some challenge. I wasn't here for the 2nd day.
This was interesting and there were some confusing parts at first. Also, I didn't care much about it either.
I thought this lesson was boring and hard. It was like that because the directions were sort of unclear to me.
I thought that this lesson was not very well written. The directions for the questions were you rewrote them as testable questions was very confusing. The directions need improving.
The information was easy and kind of hard but I understood it well.
When we had to rewrite the questions. I thought we had to write answers. That part was a little confusing.
The questions on the paper were kind of hard to understand. Making the testable questions was the hardest part.
This lesson was boring and not so exciting. The lesson

needs more.
I learned more about questions.
This was kind of boring, there wasn't much to it. The experiment I didn't really like.
I really didn't like it because it was boring.
The questions were hard to make. I really didn't understand the material.
I couldn't really think of any questions. It was pretty easy to do.
All of the given information was easily understood by myself. But, it did not make me think of any new questions.
I didn't like making the testable questions. I understood the homework.
Once again, it was easy.
I understood the answers and explanations a little. It made me think better.
The lesson made me think of questions. It was okay.
I thought it was interesting and I could not understand the questions too much.
I didn't like this lesson.
I did not like anything at all when we did scientific investigation.
I thought the stuff we did were boring. I had some fun on the homework.
This lesson wasn't that interesting. I understood it good but it was really boring.
I did not like this because all we did was talk about questions and I could have fallen asleep.
This was very boring.
The lesson was alright, but I did not like it and was too hard.
I understood this lesson but it didn't interest me. I think there are ways to make this lesson more interesting. They could have make up questions about things that interest us.
This wasn't as fun as the other lesson, but we learned a lot of information. Need more activities.
The only part that was interesting was we got to work with other people, but it was boring to write and come up with questions. I would like more hands on with this activity like you have to come up with a question and actually prove it with materials we have.
The lesson was boring, too much work and writing should be more like one of the other lessons.
They project was easy to read but it was very tedious to do. It made me figure out what a testable question. I think that some of the questions were a little boring.
There was too much writing. They should have you type it, but other than that it was interesting.
This lesson was ok, but it would be cool if it was bout music or sports.
This activity was not that interesting. I would have rather done something else.
I didn't understand the making questions. I'm not really good at questions, so I didn't do very good on this and make it a little easier to do and approach it a little different.
The material was very easy to understand and to read.
I thought this lesson was boring. It was hard to write a lot. I didn't understand the questions. I didn't know how to change the questions into a testable questions.
I didn't really like the activity, but when we talked about why the sky is the color it is, that was interesting to me.
I think this lesson was very hard.
Doing that was easy but something's were not.
This lesson was okay I guess. It's kinda cool making the testable questions. It was fun thinking about them.
I think that it was hard and it had some questions that were interesting.
I did not like this lesson, it was boring.
I liked the lesson a lot.
The lesson was not as hard or a make-you-think thing as it was boring.
The scientific information was a little difficult to understand
The lesson was not very interesting
I had many new questions
It was sort of boring
I think we should have had more choices.
I felt like a 4th grader again.
I liked the lesson, but it got just a little boring.
Was easy to complete, would be better used for lower grade levels.
Some of it was interesting and made me think.
The "Loud Music" letter to the editor. It said that teenagers can still listen to loud music as long as they wear head phones. This could still blow out the teenagers ears.
Again, I don't really understand what is meant by "I could read the information easily".
Kind of boring, try to spruce it up.
This was a fun lesson.
It was boring.
Maybe kick up the questions
Easy questions
Add more ninja stories
The examples were good.
This lesson was kind of hard for me, but as I began to understand things it was superb.
I thought this lesson was fun because we got to think of different questions ourselves.
If it could be changed into questions & examples that are easy to understand & still make me and others think a little.
It was ok.

What did you like most about lesson 2?

It was easy to understand.
It was easy
All of the different questions
To see if questions were testable
I like asking questions about things I don't understand
To find out what was going on in different schools
I liked the information
Talking about the questions.
I liked getting to wonder about this.
Learning how to make testable questions
That I had fun
Thinking of question
Being on the internet looking for answers to questions.
Reading the questions
I wasn't here for most of it.
Thinking how to make the question testable.

Seeing how other people formed testable questions.
It was alright
It had you go past the questions and think more.
It kind of made me think.
I liked that we got to answer different questions and had been able to say what we had come up with.
Thinking up some testable questions.
The computers.
Having to come up with different questions was fun.
Trying to think how to change it into a testable question.
I can't say I liked it, but it was ok.
Learning the difference between a testable question and a normal questions.
It made me think more
It made me actually realized the things.
That it gave symptoms of the student's that were ill.
How easy it was
Nothing
Thinking up ways to make the question testable.
Looking at maps.
It was challenging
That we got to switch the questions around.
Thinking about a new way to write the questions.
My group
I got to work with my friends
There was not much to do and it was something I could do by myself
I enjoyed it, I just though that it was fun & interesting
That I got to make new questions.
Deciding on testable questions
This gives you new ideas
Thinking of testable questions
I like to create new ideas and some of the questions were interesting to think about.
I do not know
I like going to the computer lab and doing some stuff.
You learn new things from the sentences.
That you got to come up with your own questions.
I like asking all the questions.
Learning what happened after the testable question.
I did not really like this lesson at all.
Nothing
It was different from anything I have ever done before.
You thought about the questions and many come to mind so you had to think.
That we were able to create new questions.
Nothing much
The variety of "correct" answers.
I liked when we had to think of the questions.
It was kind of easy
It taught me about testable.
How to make a testable question.
I liked that we learned more about scientific questions.
I learned how to write a testable question.
The questions were interesting.
Making up the questions.
Coming up with testable questions.
I liked because you get to think
It was challenging
It wasn't too hard
Lesson 3 - Investigating disease outbreak
The bug blood question

No Homework
It made you think
No Homework
Sharing
Questions
Finding out what a testable question was
Coming up with testable questions.
My class didn't have to do all of it
Everything
I liked when you got to convert the questions to testable ones.
I liked that you got to work with a partner so you got new ideas
Finding the testable questions
What I liked the most about this lesson was the whole thing. It was interesting on how we could find out information.
When we finished
Trying to figure out new testable questions.
It was easy and fun
We got to make up questions about a topic.
That it got us off homework
All of it
I liked it all
I liked changing the questions so they would be testable.
Reading the questions
I liked trying to make up questions.
You had to think really hard
That we got to compare human blood to bug blood and we didn't have any materials to work with.
Trying to make more specific answers
The questions
The questions
Reading the questions
I liked that you go to do like a science experiment
Seeing if my testable questions matched the scientists questions.
I didn't really like it all that much.
Trying to think of questions that narrow it down
Turning the questions into testable ones.
That I got to think about questions that you could test.
That we had to make testable questions about the different topics.
It got me thinking a little bit.
Learning/Realizing that some questions can not be answered until suitable for answering.
It was interesting.
That we got to learn what our first question has to ask and what type of question do we need to ask.
I didn't
Nothing
We had to come up with testable questions and that's not always easy on the first try.
That you could ask as many questions as you like
It was fun looking for questions
I liked inquiring about ideas.
Not much (It was hard)
It made you think of different types of questions you can ask and how you get the evidence.
Nothing
We had to think of ways to answer questions most people don't think about.
I liked the making of the questions adding two more

questions to it.
Made me think
we get to pick which question to ask
that you could get different questions out of the same problem.
Being in groups and solving the question
That we got to share what we think and it made us think harder.
It was easy
It was kind of easy but it taught us how to make questions out of problems
It was cool.
To learn how to change an untestable question to a testable one.
I had a partner
Trying to find the answer for the questions we had.
That scientific studies never end with a conclusion they end with more questions to find out more.
I liked what question we were given.
I could work in a group.
They asked your opinion, no experimenting needed.
It got me thinking about different questions.
That it was about animals
When we could worked together to figure it out
To explore beyond and to keep thinking about more questions rather than answers.
I liked how everyone had different aspects on what questions to ask.
I thought a bunch of new questions to ask.
That we had to think of questions
it was just right
It was a little harder oppose to the previous one and it made you think harder
Fun to learn new things
I liked saying it was not true and disagreeing with it.
I liked to compare what I thought about the problem and what other people thought of it.
It made me think a little bit more and you had to come up with more answers to investigate it.
It was fun & it really got me thinking
That we could choose which one we wanted to do.
It was easy
Coming up with a testable question
That it was easy
thinking of questions
I didn't like any of it
It was fun
I liked having me think about new things.
easy to follow
I think what I liked most was that it made me think and like pay attention.
it was easy
The explanations to some of the answers.
I had fun
It was fun it made me think in a different way.
This made me think even more on "testable" questions.
The facts
It was more challenging, but at the same time interesting
We got to think like scientists and we learned new things.
working in a group to find if a question is testable
This part was hard
looking at the charts
that we learned about a testable question

We had to look for the answers.
The stories
That we got to pick a topic & find questions to make them testable.
we got to work as a group
We worked with stuff I half knew.
getting to work in groups
I got to work in a group and they helped me a little.
That we got to work in a group so it was more fun.
Coming up with a better question than our first one. (that we came up with).
You had a chance to actually use the information that you had been given in a scientific procedure.
We got to work in groups
Only doing one problem
It made me think for the answer rather than being obvious.
I didn't need to work with anyone
I learned what makes a good question, it made me think about topics relating to the question.
That we got to ask about questions we normally wonder about.
It was more challenging than Lesson 1.
Nothing really
we had to come up with question
I liked reading different people's opinions.
It got me thinking more.
The questions made me think
it was fast
Trying to think of a testable question.
it made you think
It involved me into the project.
The first two parts were easy, the last part was harder because it didn't give enough info.
Some questions gave me a challenge
It kept me active and made me think of further things to do.
how to make them a testable question
it helped me figure out what a testable question is
It made you think up new ideas & showed you anything could be possible
the questions were easy to understand
Answering the questions that were testable.
I liked it when we compared things to different animals. We talked about cold-blooded and warm-blooded animals.
Actually, learning the definition of a testable question and understanding it.
I got to put what was on my mind on a paper
the fact that I learned a lot from it.
I liked getting in groups
I like to compare stuff.
I liked getting in groups
I liked working in groups and trying to come up with the answers.
We worked in groups and asked questions and we made new better question
Figuring out that band is the problem
When we made some testable question
I like when we had to make new testable questions.
I liked everything about this lesson.
We were in groups
Doing the testable question
Working in groups and thinking of questions.
The thing I like the most was getting in groups.
I liked learning about bugs.

We got to work in groups
We got to work in groups
I liked thinking of questions in "groups".
Making up questions about different things is what I liked most about this lesson.
We worked in groups to try to understand it.
When we were making up questions together.
I liked working on the computers
Working on computers was what I liked most!
I like to work in groups.
I liked having to think.
I liked thinking of the new questions
I liked that we got to reword stupid questions.
We were in groups half of the time.
What I liked was when you had to find the evidence and analyze it.
We found out better questions.
It was fun.
As a class, we worked together and answered the questions.
I liked trying to make new questions to be tested.
It made me think
It talked more about the problem and gave good complete answers.
That we got to work with someone.
We can find out stuff about stuff we already don't know.
It made you learn new stuff.
The questions was easy to think of.
I liked trying to come up with new questions.
I didn't like the lesson.
I liked the part were we got to work in groups.
I liked working in groups.
The one about sun and sneezing.
We had to think of a better question.
It made you think
I liked when we read the paragraphs and understanding the information.
I liked that I learned what a testable question was.
I liked how they set up the homework. Some of the examples were easy.
I liked making new questions. It made me think a lot.
I could understand most of the material, but other than that, I didn't like it. This was a bad lesson and you should take it out next time.
The homework was easy. We didn't have a lot of homework.
The things I liked about the lesson was when we did an investigation. The scientific information that went along with the investigation was well understood and definitely liked.
What I liked most about this lesson was when we got into the testable questions and working with the testable questions.
The most I liked about this selection was the homework because on the homework we used are opinion.
I liked the reading part of the work.
I liked to find the questions and make them up yourself. I also liked that other groups got to share their information which made it a lot easier. I also liked that we got to study maps and other things which made it a lot more fun.
I liked the homework and answering the questions.
I liked the homework. I also liked answering the 2 questions.

I liked reading the paragraphs and picking a story.
What I liked most is how you had to challenge your brain.
The only part of this lesson that I like was doing the investigation. I could read the examples easily.
I only liked that it was a group thing. I didn't like anything else.
Learning what a testable questions is.
I liked the writing part. That was somewhat challenging to come up with an investigation. I liked the quick and fast reading.
I liked to make the questions the most. I liked how we did it as a group.
Making testable questions I liked about that lesson. Also, I liked reading the paragraphs on how the parent's don't like loud music and how Vitamin C cures your sickness quicker and also how quick & tasty foods are good for you.
I liked learning things I didn't know. I liked working with my group.
I liked having to work on the questions. I thought that this lesson was really fun.
I liked most was it was fun. I liked also that it was pretty easy.
What I liked was that I learned a lot about the lesson how loud music could hurt your ears.
I liked the fact that it wasn't too hard. Also, it was not too much work.
I liked this lesson because it wasn't hard and there wasn't a lot of work involved. It was kind of confusing.
There was not too much work. I had a little fun.
I liked the articles.
What I liked most is that it got you thinking. It was kind of cool because it gets you thinking.
The only thing I liked was making the testable questions. I liked it because it was kinda fun.
The lesson made me think of a lot more questions. I also liked when Ms. Craig broke the thing of questions.
I liked turning the questions into testable questions. I also like that we only did one question each.
I didn't really like this lesson. The only good thing about this lesson was that it just barely sparked in my brain, which, in truth, isn't good at all!
I liked when we had to think about a testable question and do different experiment.
I did not like too much on this paper. I liked the fact that I didn't have to answer the questions.
I liked that we narrowed the reasons that's why the kids were absent. We could understand the information, this lesson was fun.
I think that the best part of this experiment is that it will help in the real world. Even watching like CSI, I could make my own investigation.
I like reading the three paragraphs. I also liked writing about them.
What I liked most was remaking the questions. I also liked making new questions.
I liked that it made us think hard about making a testable question.
I learned what makes a testable question testable.
What I liked about this lesson was, it made me think about how to make a testable question. Then I enjoyed working on creating an investigation.
I liked how we were working with questions.
That it was easy but harder than the boxes.

I liked working out the questions I had and making testable questions.
I don't remember much about this lesson but it was a little fun.
The thing I liked most was the homework part. The homework was easier than the class part.
I liked making the testable questions for homework. The topics were fairly interesting and were fun to write about.
I liked the most was when we had to make up that investigations.
The part I liked the most was when we had to make up the investigations. They were about the loud music, Quick and tasty and the health department….
I liked making up the investigations. We had to do for the paragraphs. Il liked the investigation making for the Quick N Tasty restaurant best.
I really did not like most of this lesson. It needs more to it.
I kind of liked it when it was over because it didn't interest me and it was boring.
The best part of the lesson was the end. I was not interested and didn't really learn much.
What I mostly liked when we had to do one question and not six.
What I liked that Ms. Craig made us only do one sheet instead of six.
I liked that I got the ability to make testable questions on my own. I got this technique from the lesson.
I learned to make testable questions. I liked it when we only did 1 per group.
There was strictly no homework
I thought this lesson was a little harder than Lesson 1. It let me see that opinions and personal beliefs could not be testable.
I liked how all my questions made the quiz easier.
I liked the fact that the teacher broke the paper into sections.
I didn't like this lesson.
I liked they Miss Craig give us only 1 question to do instead of 6.
I thought the …. Work was fun and I thought I learned something everyday and that was the learning.
I liked that Ms. Craig gave us 1 questions instead of 6. I think it was better.
What I liked most about the lesson was Ms. Craig broke up the questions.
Nothing, I did not get anything.
Nothing, but the 6 sentences that were reduced.
I liked the fact that we had to think about what questions we asked.
I liked that they put questions that we knew about.
This was an easy assignment so that is what I liked by nothing except coming up with questions. I didn't like that we had to write and not work with each others.
I didn't really like this one at all.
What I liked the most was writing what experiments you would use.
It was fun and interesting.
You got to be kind of creative because you can make your own question. I liked this because I was able to feel like a detective during this lesson.
I liked the talking part. The worksheets were fun.
I liked working in the groups.
I didn't like working with questions too much because

questions usually come harder to me than other things.
I liked the homework because I liked the article part.
What I liked most about this lesson is when we talked about why the sky is blue. I liked doing the questions, figuring out which is testable or not.
I liked working with a partner on this lesson.
Doing questions
I liked thinking of the questions.
I thought the questions were interesting.
The questions were good, but it was little hard. You should like give answer and make
All of it
When us (student's) had their own opinion of is there a dumb question.
It was on real schools.
It was interesting and made me think. I like looking at real life examples.
I could relate to one of the questions because one question said that why do people sneeze when they see bright light? I do that sometimes too.
I liked the discussions we had about the questions.
I liked answering the questions.
The only challenging part was trying to identify a testable question.
I liked when we met in groups & did the 5 questions homework.
I liked using the internet to get the different information.
Seeing all the data about absences in different schools.
I like talking about questions and like having debates about questions.
I liked thinking of new testable questions.
When it was over
dumb question part
That it taught me how to rewrite a testable question.
I loved analyzing the data we have collected.
Working with partners
lack of thinking
Working with partners
We could find the information on our own.
Finding out the classes.
That it was fun and required some investigating
Trying to find the info
I liked the lack of thinking needed.
I liked the suspense from wondering about what's on the bottom.
I liked that it helped me write my own testable question.
I learned some new questions
I liked the homework
I liked the fact that it helped to make me think about my own testable question we had to write of my own.
The thing I liked most was thinking of testable questions of questions that had already been written.
I liked to grow the plants for my project. It made me think about how to do these things.
That we got to learn about testable and got to investigate too.
Homework was a little easy
The questions
I like when we have to look for the explanation
Making up questions
I liked how I had to think of new questions.
Figuring out things.
The stuff it made me think about

The questions and the part where we have to make up some more
We got to think of things on our own.
working with partners to get answers
I liked how we had to work in groups.
Thinking of how questions were dumb
The questions
I liked researching the information
Coming up with our own question
Being able to pitch in ideas.
Having to make new questions.
The teamwork
Writing questions
We got to work in groups to rewrite the questions.
Editing the questions
Turning the sentences around so they were testable.
That we picked the articles and questions we wanted.
I liked criticizing the "bad" questions.
The questions were all interesting.
The interesting questions.
Reading the questions
That it talked about Middle Schools.
We did it in a group.
Was not there
fun to think about questions
We worked as a class, and not individually.
I didn't really like the lesson, but it was a creative way of trying to teach the lesson.
It gave us something to think about.
Working together
It was fun
It was easier than the other lessons.
The editorials were my favorite
Re-writing the questions / statements into a testable questions.
Working with others to see if questions were testable.
I liked the editorials and writing about them.
I enjoyed learning what made a scientific question all together
The questions were interesting.
It was easy.
I liked that the questions were interesting.
Thinking about our questions.
The question were really fun
The articles we worked with.
We didn't have to write much.
It made us think
Figuring out questions
Nothing, it was boring.
We transformed a question to make it more testable without any help.
The interesting questions.
Making our own questions.
Restating the questions.
It was fun trying to rephrase the questions to make them testable.
I liked reading the editorials and coming up new testable questions.
We got to think about new things.
Thinking about questions
Group discussions are interesting.
I liked the question that people references were.

It was fun to work w/groups.
I liked working in groups to compare thoughts.
I could ask questions and try to find solutions.
Making the questions.
We worked together.
It encourages social interaction.
We didn't have to do any hard work.
The questions that we had to determine if the question was testable.
Getting to make up a testable question.
Interesting statements made!
It made me think
It was enjoyable, not boring.
It was easy.
You could come up with anything we wanted.
Making the question testable.
I liked rewriting the questions to make them testable.
It really made me think
The thing I like most about this lesson was that you got to use your imagination to think of the questions & investigations.
Having to think about the question before doing the investigation.
I liked the article variety and the different things you could do.
I liked how we acted like scientists and got to ask questions.
Got to make a question.
Changing the questions to make them testable
I didn't really like everything about it.
There was very contrasted articles easy to tell which was which
Making our own questions.
Reading the material
Discussing it in class
I liked everything the same
It was short
Being able to use your own style or questions that is testable.
I liked learning about making testable questions.
It was odd, but fun.
It was fun to find ways to answer the questions. I liked the letters to the editor.
The investigation process
I liked the example of questions and a new idea.
Coming up with our own testable questions.
It made me think
It made me thing in a way I don't normally think.
Learning how to write testable questions.
We were actually doing something that allowed us to enrich our minds with knowledge that we could get interested in as adults.
It made you think really hard on if there was such thing as a dumb question. Also coming up with a testable question on the articles was very hard.
I liked that it made us think about how to narrow things down. I liked that the original questions were broad, and then we had to decide how to make it more narrow.
letters to editor
"Loud Music" letter, I thought it was an interesting concept.
I liked making new testable questions, in more detail, to follow up the questions that were already composed.
The letters to the editor were fun.

I liked the thinking involved in this activity. You had to think about your testable question actually being testable.
The fact that working in teams, we could come up with seemingly testable questions, then other groups could disagree.
I enjoyed coming up with new questions & listening to theirs.
You learned new facts.
the questions submitted by the class
It made us think, it made us ask questions. It required teamwork and it made us think.
It made me think a lot about what a testable question is.
I personally liked the letters to the editor part, because we got to create our own investigation.
I liked most when we came up with new questions under the old ones.
I liked making testable questions and coming up with evidence to support my answer in the letters to the editor part.
I liked thinking of a new testable question.
Some of the stuff we had to do was pretty fun like the making question and the discussions.
I liked the fact that it made me think.
Got to use different ideas
Creating new testable questions
We got to be creative and think of our own questions.
It showed or introduced me a little to how to create a testable question.
I liked how we all worked together to make new testable questions.
I didn't like anything about it
This lesson was helpful in explaining what is a good testable questions.
Seeing what everyone else came up with.
Getting together and working with my peers with different activities.
How we were able to come up with our own questions about the "letters to the editor".
That some of the questions given was stupid and funny, like about bug blood & the bright light causing people to sneeze.
Everything
I like how we discuss things, because it's the way I understand things.
That we came up with testable questions, so we learned the stuff that scientists do.
I learned how to use resources to find what I'm looking for.
It was fun working together with the questions. Some questions were dumb.
I liked making different questions about some things that I was curious about
The projects
What I like about this lesson the most is to see the question.
Thinking about the question
I liked that the questions were really interesting, and that they were questions you really didn't take time to think about.
Questions were interesting.
It was easy. It was cool to have actual evidence.
Nothing really, just the logic of it.
It was fun
Nothing

I like most about this article is questions
The collection of information and working with people & groups.
I liked looking at all the questions on the sheet.
I got to know more things and make new questions.
I liked how we made more questions about the questions they gave us.
Everything
The groups
I liked how we had to work in groups and figure this out.
There was nothing I liked most about this lesson.
The questions were very interesting
I like making up the question
The questions that I really didn't think were true, like sneezing when the lights were on.
Learning what makes a question a good question.
The lesson was okay. There really wasn't anything to like.
Making up questions
I learned how to make good questions on our observation!
I was interesting to look through different questions and connect to them.
When we came up with our own testable questions.
When we had to think of questions because that made us think about on what to write about.
Making up interesting questions & then discussing it as a class.
Looking at a question and asking more questions.
I liked that instead of answering the question you were making the questions.
I liked how there were so many questions we came up when we only had little info.
Learning new things like bright lights make you sneeze
How we thought about the question we needed to figure it out.
Opinions and facts
Nothing, It was boring, it was too easy.
What I like about this lesson is how where making question and answering them
That this lesson made me think for example when any group had to come up with a question.
When we looked at the different visuals to help us with our research / investigation
We talked together and enjoyed thinking of new questions for observations.
How people were making really goofy questions and some were really funny.
I liked this because I got a better idea of what a testable question was. I also liked this lesson because it was short and straight to the point.
We got to share with each other what we thought.
It made me think me think about new questions.
I liked to make questions up and help each other. Also, doing a lot of questions was fun and easy.
Working with the subject
Facts
The questions
Asking questions about bug blood and human blood.
I liked the cool questions asked.
Mostly like the question
How we discuss our questions.
I loved the mystery that it created in our minds. Especially why dolphins don't drown when they sleep.
That I got to work with my friends.

I don't remember.
discussions in class
Predicting what might have happened. Also, putting your minds in to it.
I liked thinking of new questions for my topic.
The testable questions.
I liked looking at the research.
Learning about why we sneeze when we look at the sun.
Working with my partner and doing the questions like how is bugs like different than ours.
The questions were kind of funny but it was hard to think of other questions.
It was fun to think of question
Sharing our opinions
I liked this lesson because the questions were very interesting, at least some were. I felt the need to investigate the question.
When we left the room
I liked how everybody came up with a testable question & used their brains.
the different understandings & aspects of questions.
I liked the question.
You had to make testable questions.
Answering our questions
Looking at tables and figuring science with math.
Thinking up new questions
I loved the part when Mrs. Grecko explained us what was going on because till then the less was confusing.
I liked that this lesson is a little bit easier that's what I liked.
It took me awhile so I didn't just finish it in….challenging
Thinking of questions that were reasonable to answer and testable.
What we got to see and test if it is testable
Working with questions
The questions. I didn't know the answers to them, and I thought they would be interesting to investigate on (e.g. why do your fingers wrinkle after a bath?).
I knew the qualifications of a question.
Group work
It was fun because you had to think.
This was easy, you had to make testable questions.
The letters to the editors.
The most I liked about it was that we had to make the questions into a testable question.
Working with questions
I liked that we had to make up testable questions.
I liked that some of the questions were interesting and it was fun to think about them.
When we wrote different testable questions and then discussed them.
Working in groups.
How we had to look for the questions.

I liked all of the funny questions.
I really didn't like these lesson because I didn't understand it.
What I like most about this lesson was that we got to ask question like science people.
Not really any of it.
The strategy we used.
I liked the questions they were very interesting, and made me think of other questions.
What I liked about this lesson was interesting and I learn why and how that stuff happens.
Listening to other people questions.
I found everything interesting
Good to read
Asking new question
I liked it when my group had to think of why certain things happened, because I always wanted to know the answers to these questions, and I finally understood why things happen.
We talked a lot
It made us think a lot.
Reading different questions and changing them to sound like different questions to answer.
I liked the questions because they were interesting and it made me find out the answers.
All the questions.
It was an experiment
That it was easy
I liked it, it was ok.
Not much
There was more than one right answer.
Trying to find a new question, because we had to think hard.
You learned how to write good questions
That it wasn't too hard.
It made us think and try to figure out questions.
The different topics were interesting.
Finding testable questions.
What I liked most about this lesson was that it made you think.
That all of the information was easy to understand.
It was easy
It was fun
Investigation
It was fun because you didn't know if you're right or wrong.
Expanded your mind to come up with a new question that was testable.
It was easy and fun.
It was easy
Thinking of our own questions.

What did you like least about lesson 2?

It took a lot of thinking to figure out the right question
Nothing
Thinking of new questions
Doing it for no grade
We were restricted to certain questions

Reading all of it
Writing
I did not like being asked to make more specific questions
I do not know
It was a little bit harder than the one.

Having to write down so many questions
Having to talk in front of the class
Rewriting them
I wasn't here for most of it.
It was hard.
Nothing
I couldn't find some info.
Nothing
That I had to work with a partner.
It was a little hard, the questions were not so broad.
Thinking up some testable questions.
The testable questions
It was a little easy.
Nothing
It was hard.
Nothing
Don’t know
It was boring
It was a bit hard
It did not have an actual video.
That we had to do it
Trying to make up easier questions
It was not very exciting.
Looking at attendance data.
It was a little hard to understand
Some of the questions were kind of weird.
The time it took.
Too easy
We only got a little time to do it.
Some of the questions stumbled on me.
Some of the questions, because I did not understand a few of them.
Nothing
Writing the information down
It made me think about other things.
I liked them all
I do not know
I did not like how hard the work was.
Coming up with more than one question.
How specific it had to be.
I did not like hearing what other people put.
Writing so much
That we could not answer the questions right off the bat.
It did not make sense
I was not explained very well, so it got confusing.
None
When we had to think of the questions.
Making testable questions
It took a while to do
I did not like it when we had to write about bugs.
I did not get it
Too easy
How easy it was
I did not like the examples or the sentences given.
It was not very fun.
It was hard to figure out how to make them more specific.
Nothing
Figuring out what a testable question was, it confused me.
Everything
I didn't not like anything
It was plain
Writing testable questions.

There wasn't really anything.
Testable questions
Thinking of the questions.
It was difficult to make the questions into testable questions.
Didn't understand it
The rewording of the sentences.
It wasn't a "fun" way to learn.
Not being able to find out the answers.
It was boring
It was not very interesting to do.
I did not like that some of the questions were confusing.
I liked the whole thing.
Trying to think of questions.
Not so much into science so didn't care for it much, but it was still interesting.
Everything
Some of the original questions made it hard to make up a specific questions to go with it.
The videos were not up yet.
It was hard to figure some of the questions out.
Answering the questions6
Everything
I didn't like changing to original questions. It was difficult to know what to change them to.
Some things were confusing
It would have been neat to like work with an experiment and use tools to find the answer.
It was kind of difficult to understand
It was not fun
Nothing much
It was kind of hard to find a testable question for some of the problems.
Making testable questions
Almost everything
Having to think of 2 questions for each.
Well I just had trouble trying to think of a testable questions.
Nothing really
Not getting some of the work.
It wasn't very appealing
Our group/I did only one of the questions whereas I thought we should have done all of them and then compared.
Nothing
That we did not get to test them or find out an answer.
All
Trying to make the stupid units testable
Sometimes the questions we wrote didn't go with the evidence.
Finding the answers.
I found it a little boring
Writing down things
It was hard
It was a little hard to get back up evidence.
It was too complicated to understand.
None
I didn't like not understanding some.
boring kind of
it was hard
that we had to think about so many different questions.
It was hard coming up w/questions
Nothing really

The types of questions asked.
It was boring
It was boring
The directions weren't that clear
It was easy
not enough partners
There really wasn't anything that I least like.
Keeping track on your questions.
I did not like all the questions and how they were asked.
It took a long time.
It didn't bother me, but my hand hurt from writing so much.
I didn't exactly know what the questions were asking.
Not finding out the answers
It sometimes was confusing
Some of the items we had to question about were corny.
I couldn't find the answers to all of my questions
That it was a little difficult
It was boring
again, it was not the most fun but still informative
Some of it was weird
I liked it so yeah.
finding the information
it was so boring.
That it was boring.
Sometimes confusing
not being able to test it.
I would have liked to know the answers to the questions
everything else
It wasn't fun
work sheets
I didn't like the topics we had been given
the group did less work
I didn't like it because it was hard I sometimes couldn't get the right answer.
I didn't really like it
Some of the questions.
I got in trouble for stuff I did not do
My group
I would like to know the answers to some of the questions but I liked it.
It was hard to create "testable" questions.
Too many questions
Some of the material I just didn't get
It was a little hard to understand what we were supposed to do, wasn't that interesting.
Having to do the "quick and tasty" and what not sheet (writing the inquiries for them)
Too hard
The form of the main work sheet
that we didn't do much
I didn't get it.
It was boring
at first, we did not understand
We didn't find out the answers
It was easy and boring, you should have a gifted science program because this class and especially this activity was really easy.
It was boring
Messing up and not having the right question and having to think of another one.
In general, it was just a little boring, writing testable questions w/o actually putting them to use, is not very appealing.
It was boring
Trying to find a good question
It was too short didn't give us enough time.
We got into groups to do this exercise
Once again we had to write, but I thought it was okay, since we didn't have to write a lot.
Too much writing. I didn't like that we had to ask the same questions again but reword them.
It wasn't a hands on project.
It called for lots of thinking
Not that much
I wasn't sure if I was coming up with good questions.
Took too much time.
Nothing really, it wasn't that bad at all.
everything
I didn't like working in a group.
having to make so many questions.
the subject
Some got me stomp
Some of the questions were hard to make them testable.
Taking data
too much writing
To be honest, nothing, except we didn't have a lot of information to work with.
it was boring to sit in a chair for a long time
Probably trying to find out if the question is testable or not.
way too easy
I liked the lesson.
I actually didn't dislike anything. It was a good experience.
I don't like to answer question
Nothing was bad about this lesson.
There was really nothing I didn't like.
There was really nothing I didn't like.
Nothing
It was too hard
I didn't have anything I did not like
I didn't like when we had to read the paragraph and make an observation.
There was nothing about this lesson I didn't like.
Having to think
The group I was with.
This lesson was kind of boring.
I didn't like to read I just like to listen.
We had to think of some testable questions.
There wasn't anything I didn't like about the lesson.
I didn't really like thinking of questions and writing.
Having to answer the questions is what I didn't like about this lesson.
I did not understand the lesson.
When we were trying to make up testable question on our own.
Not working with my friends but with people I didn't like!
It was a little hard.
I liked it.
The thing I did not like was that it was kinda hard to read some things.
I didn't like some of the questions.
Having to write lots of questions is something I didn't like.
What I disliked was having to make up another testable question.
We had to do it over and over again.

There's nothing I did not like least about this lesson.
When I couldn't like about a testable question
I didn't like having to choose a question to be questioned again.
It made me think too hard
It did not show enough detail and examples to help get answers.
It got harder on some questions.
I don't like least about this subject is the writing.
Coming up with the questions.
The questions were not that interesting.
I liked doing the worksheet least.
I did not like one of my partners that much.
I disliked having to write so much.
The bug blood one
I did not like the fact that the only subjects were Science.
We had to think a lot.
We didn't get to solve it. We didn't get to do experiments to find out the questions.
When we had to do all of the questions and stuff.
I didn't like it because I never like homework.
I didn't like some of the examples. You should change this lesson.
I did not like the homework because it was not easy to do the homework off those 3 paragraphs.
I didn't like making up the questions. The making of the questions was the hardest and worst part of this activity.
The lesson was too easy.
The thing I liked the least about the lesson was working with the questions. That was a little bit harder to understand.
What I liked least about this lesson was when we had to do worksheet creating an investigation.
I didn't like the toughness on how difficult it was.
I did not like having to read 3 different paragraphs.
I didn't like that we had to analyze it and do all sort of things with the questions. I didn't like that we got graded on our information we wrote. I also didn't like that we had to make up our own testable questions.
I wouldn't know, I liked everything.
I didn't like writing testable questions, I also didn't like the reading.
I hated coming up with testable questions. I can't really think up good testable questions.
The only thing I hated least about this lesson is how the blood was in there and people don't like that word so we had to say bubbles. When we said it everyone laughed like it was funny.
I didn't really like doing this lesson because I couldn't really understand one of the examples.
I didn't like the work. I thought the lesson wasn't interesting and I think the questions was difficult.
Trying to understand the examples.
I did not like how easy it was. The readings were too easy and did not grab my attention.
I didn't like to answer them. I didn't like how we had to do it by ourselves that much.
I didn't liked how there was a conflict on one of the paragraphs. Also, I didn't like doing the whole investigation part after we had to write a testable question down.
I didn't like the homework.
I didn't like having homework. I also didn't like the worksheet that we had to do the radio worksheet.

I disliked having the homework, it was hard. I also disliked the whole lesson.
I liked everything about this lesson.
I didn't like the fact that it was boring.
I didn't like it because making questions just isn't my thing.
It was hard. I was stuck a little
Turning the question into testable question I didn't like. It was boring.
That you had to keep re-reading the paragraph. It was also hard to think about the testable question.
I did not like the homework because it seemed hard. Also, I did not like the worksheets we did in class.
The thing I liked least was when I didn't understand what we were doing. I also didn't like the question thing.
I think it was a little bit confusing. This was a weird experience.
I didn't like how easy and boring it was. I feel that it was poorly thought out and I hope that it will be preplanned next time.
I really did not like doing the absence and how many students have symptoms.
I did not like the difficulty of this. It was hard to do.
What I liked least was that there was a lot of testable questions. There were so many that we didn't know what ones to choose.
What I liked least was that all it was based on was really the questions. I f we would have got the questions for a little time I think I might have enjoyed it more than I did.
I didn't like the answering the questions. The reason I didn't like answering the questions because they were kinda hard.
I did not like the paragraphs, they were hard to read. I also did not like how you worded some of the things.
I didn't like that in the lesson I didn't find it clear. I thought the directions were confusing.
It wasn't very exciting but it was interesting.
What I liked least about this lesson was it was in some parts unclear, like turning the non testable questions into testable questions. Also, it was sort of boring as a lesson.
I didn't like how I was absent when we did this and how weird the questions sounded.
I didn't like answering and making the testable questions. It wasn't very interesting.
I least like where we had to take the test paper thing.
I didn't dislike anything.
The least thing I liked was the class work that we did the thing was making testable questions.
I didn't like the directions for making the testable questions in class. The directions were very hard to follow. The questions sheet also didn't have any directions making it even harder to follow.
I didn't like when we had paper that we had to make one of the questions into a testable questions.
I didn't really like the part when we had to change the questions around. It was kind of hard and confusing.
I didn't like some of the paragraphs people had written. I didn't like the one about the music because using head phones is just as bad.
The whole lesson in general. The lesson had no value, it was sloppily done. This lesson disappointed me, I think it needs more hands on stuff.
Everything
I didn't like it because I didn't really learn anything. I

understood but I just didn't' like it.
I didn't like the whole thing because it was boring and I was confused.
I really didn't like it because I really didn't understand it, so I just try my hardest.
What I didn't like is that there was no info.
I did not like this lesson because the questions were very hard. I found it confusing to make a testable questions and tried to answer it.
I don't like making testable questions. I didn't like the homework.
My partners still did not let me use the computer.
I didn't like the part when we couldn't see the bottom.
It was confusing, all the materials were confusing.
I did not like it because it was extremely boring and hard.
This lesson was hard.
I did not like it at all, but it was ok.
I wasn't liking the paper because I knew that the question was too weird.
I didn't like it because it was very boring. I was kinda confused too.
What I liked least was we did not do anything fun and only talked.
Everything
I did not like that it was a little boring.
I didn't like cause it wasn't interesting.
There were hard questions that most of us didn't like. More things that went with our life.
This was a little hard to come up with question, but not too bad.
I didn't like all of the writing and all the work. You should have more of a fun thing about testable questions.
I didn't like writing the questions. If we worked as a class instead of partners so we would have the right answer.
There was too much writing.
That it couldn't be just any type of testable question. It had to do with the category. I would rather have been on my own.
This activity made the day go slow. The questions were hard.
I didn't like making questions.
The one thing I didn't like was actually having to answer the questions.
I least liked making the questions.
What I liked least about the lesson was doing the homework. I didn't really like the questions we had to make.
The questions were difficult for me to understand.
The writing
I disliked having a 6 min time limit to think.
I did not like most of it because it was hard to do.
I did not like the lesson. It needs to explain more and it could be better.
Everything was interesting about the lesson.
It wasn't about our school, Baker.
I didn't like looking at the data for the survey because it was kind of hard to comprehend.
I don't know, nothing.
I didn't like answering the questions on the paper.
Everything
It was hard.
This was a pretty boring lesson, I didn't think it had much of a point because testable questions differ with each subject.

I do not like all the papers.
I liked all of it, but the part I liked the least was the editorial part.
The graphs and data
I didn't like that we didn't get to find out if there really is such a thing as a dumb or good question.
The part I didn't like was when we had to find out if there was such a thing as a dumb question.
When Mr. Molley said that our group answer was wrong.
Making testable questions out of six questions
No real experiments.
I did not like the investigation theme. I wish the subject was something else.
Figuring out the testable question.
boring, not challenging
Trying to think of a questions
The questions were confusing.
All the work.
It was too easy
It wasn't fun, interesting or even anything.
That we couldn't see the bottom.
It wasn't very hands on.
It was very easy and I already knew how to do it
The part about what makes a question a good question
I mostly disliked how the questions were formed as the questions that wasn't that important to us or me.
The idea about what makes a good question was too broad.
The work that we had to do.
I couldn't think about the question and it was a little hard but easy.
The least thing I did not like is when we have to work in groups.
The questions you had to fix were kind of dumb
I disliked how I had to think of new questions.
The materials
The questions was kind of hard, well, some of them.
Some of the examples we didn't know enough about to ask questions that would be good enough
It was not very interesting to me.
I did not like that we had to work in groups of 3.
Thinking of how questions were dumb.
The writing
I did not like how the data was displayed
I thought it was boring
Our question that we had to fix.
Defining a testable question
Not knowing something about the question or the information.
The silly questions
Nothing, it was fun.
We never got to test the testable questions.
Writing the questions out.
That we couldn't pick the first question ourselves.
It was too easy
The editorials were boring.
making new ones
How it was hard to come up with questions.
It was too boring, we didn't get to do very much.
Was not there
never got to find out what the answers were
If you're going to do this lesson, at least make it more challenging and less tedious.

I didn't understand the lesson, the lesson didn't get much explanation of right or wrong testable questions.
It was kind of boring because all you had to do was rephrase the question.
The broad topic
It was REALLY LONG!!
Nothing really
Should have picked more interesting questions.
The editorials, that was pretty boring, they should be fun, then it engages the interest of the reader.
It was a bit boring, but helpful towards our education.
It was sort of difficult to tell about the questions whether they are testable or not.
I did not enjoy the questions original form
People would always try to locate loop holes.
It was unorganized
I didn't like that it was boring.
We didn't get to do hands on activity
It was boring
I did not like the difficulty of this lesson.
It was boring and is very unreasonably long.
I don't know
Not being able to guess them.
How boring it was
I think examples would help the learning process.
It was a pretty tedious.
Didn't do very much.
It was kind of boring.
It was a little boring at first.
At times, I lost interest, but for the most part it was very good.
It was too easy
The discussion about if it were testable.
I didn't like how we couldn't get the answers.
It was kind of boring.
Changing the questions to testable ones was sort of hard.
I didn't find all the solutions.
Answering
Hard to know what you're learning.
It wasn't very informative!
It was boring!
Making the new testable question relate to the old question.
The loud music. My music is <u>not</u> loud.
We were confused with the directions at first.
It had to be about the topic.
I didn't like writing questions for the articles.
There wasn't really anything I didn't like about it.
I liked the experiment for the most part.
Writing investigations on really out there topics.
I didn't like how we only get 3 examples.
Making the question.
Writing the investigations on Master 2.3
Kind of boring, too easy
It was sort of boring.
Reading
Thinking of a testable questions
Writing it and reading it
Stupid paragraphs
Making your own questions with only 1 little article and trying to get 2 questions out of that.
It seemed to go on for maybe a little too long.
It was a little dull after awhile.

It was a little boring to me.
It was a little hard to find a good testable question.
The easiness
I caught on right away and did not liked review and review.
It was not fun.
It was not very interesting.
That it was done in groups and we only did one question per group
Before this, I didn't know how to write a testable question, so this was somewhat challenging.
Like the cube questions, I had no personal objections.
I didn't think we spent enough time learning about testable questions on many different subjects.
The only thing that I didn't really like was that sometimes it was pretty hard to narrow down the questions.
questions on the sheet with "how is bug blood different from human blood etc…."
Everything was pretty good, therefore, nothing was bad.
I didn't like finding evidence for the "letters to the editors" activities. It was interesting to create questions, but finding useful evidence was not very interesting.
There wasn't anything I didn't like
Some of the questions were about a topic that was not testable.
Arguing with team about which questions were logical.
It was not fun.
the boring part after a questions for our testable questions
The strict rules for using the tools.
It was kind of hard to think of better / testable questions for some of the things.
The list of questions activity was not very fun because it was not very interactive.
I liked least when we evaluated each other's questions and explain ideas again and again.
I least liked coming up with testable questions and then discussing how testable they were.
It was boring.
I really didn't like the making questions.
It was extremely boring because all you did was just sit there while the teacher talked and talked and talked.
It was a bit boring and not well taught.
Should have defined testable question better
After awhile, it got sort of boring.
After it was done, I wasn't fully confident or sure about asking a testable question, I still didn't fully know how to.
I didn't really like how we didn't get to submit all the testable questions we thought up.
Some of the questions were really hard to make new testable questions out of them.
I thought that it was interesting for about ten minutes, but it started to get repetitive.
That it was boring.
Too much writing, hard to keep up.
Most of the time we were just sitting and reading instead of actually observing and questioning. It was a bit boring.
That some of the questions were stupid, like do insects get illnesses & that do your fingers wrinkle like we don't know why.
The least things were about the graphs, I think the graph activity was a waste of time.
It was fun.
I didn't like some of the questions.
The questions

That the question were kind of hard
I liked everything.
Didn't have anything I didn't like.
We used mirrors.
It wasn't interesting.
everything
More harder
Testing the questions.
I didn't like how I got a question I didn't know anything about.
Everything was fun.
I didn't
Working
Nothing bored me!
There was nothing I liked least about this lesson.
I like the lesson
Having to do so much research and several connections.
The thing I least liked about this lesson was some of the questions. I really didn't like any of them.
It was boring because there was nothing hands on.
I didn't like the part when we had to answer the question.
Having to write the questions down
I liked it all
Everything, it was too easy and boring.
It got boring because it like review of what we know
I liked it the least when we had to come up with three questions.
When we compared the similarities between the interaction of Truman and Jackson.
This lesson wasn't as great because we were talking about some things we used in Lesson 1.
Nothing really to comment.
Writing about it
Nothing, it was all cool.
Some of the questions.
The question we had about looking at a light and sneezing.
I liked least about this lesson was the fact that we had to work in groups; I'm unusually used to working alone.
It was too dull.
I don't remember.
writing on worksheets
The unlikely.
I liked everything.
Nothing really.
I liked everything
I didn't really like the lesson.
I ran out of ideas
We didn't get to investigate the questions.
When we entered the room
I didn't like writing the testable questions.
It wasn't very interesting. It was basically like how to write a testable question which didn't interest me at all.
I thought it could have had more question.
You can't have each person in the group work by themselves.
Writing

I hated the part when I was confused because when I'm confused I feel irritated.
What I liked least about this lesson was that it is.
It was a little on the boring side.
The least thing I liked about this lesson was having to answer hard questions.
Not very interesting, needs to be more fun.
When we had to answer the question
We didn't get to find out more about the questions. We made them more testable, but didn't find the answers.
The questions were too plain
I didn't like how we had to make the questions. But it really made me think.
Working with question worksheet.
The least I liked about it was that we had to think a lot.
We had to find questions that would answer the 1st one so it was a little hard to find one that would make sense.
Answering the questions
The lesson was boring. It needs more excitement.
Everything
I like everything
Questions and examples weren't that easy to understand.
It was kind of confusing.
Answering questions
Well, I never actually found out the right answer to the "questions", which I would like to have found out.
Thinking about new questions.
I liked everything
Think about the question
What I liked least was when we had to think of questions.
I didn't get most of the questions
This lesson was just right.
It was too long
That some of the questions seemed testable but weren't
I got caught up a little, it was kind of boring, but ok.
Most of it
It was kind of boring.
Not being able to think of a question.
Thinking of the questions was hard.
I would have liked to have more subjects to think about making questions on.
It was boring to just right questions, we should also experiment a little.
Answering my testable question
It was kind of boring.
How to write testable questions.
We could've had more hands on experience.
You didn't test questions
It wasn't a challenge
Observation
Didn't have a least
It was difficult to think of a testable question.
Just written work, no talking or not a lot.
The list of things you could write about.

Lesson 3:
Conducting a Scientific Investigation

Lesson 3: Teacher Results

Table 20. Lesson 3: *Conducting a Scientific Investigation* General Questions

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The lesson contained an appropriate amount of content.	0	0	0	11.1	44.4	44.4	5.33	.71
2. The lesson promoted thinking, inquiry, and study skills.	0	0	0	0	22.2	77.8	5.78	.44
3. The lesson was engaging (that is, it got students more interested in the science content).	0	0	0	0	33.3	66.7	5.67	.50
4. The lesson took an inquiry-oriented approach.	0	0	0	0	11.1	88.9	5.89	.33

Comments:

My students were very engaged today. They were examining the graphs to find out what information they could find. I did need to prompt them at the beginning of the class because they weren't connecting data and evidence.
The lesson had a lot of data in many forms - spreadsheets, charts, maps, memos, interviews etc., this seemed like too much at first but was just right because it enabled even the brightest students to be challenged. Kids loved all the detail! The kids liked being part of the health department team - they like to work in groups and thoroughly engaged in the activity. I never had to redirect or tell any student to stay on task. They just did it! The lesson fascinates the students - many parents let me know that for the first time their kids come home and talked about school :-)!
Some students complained that the pages looked too similar and thus had a difficult time finding where they wanted to go.
It was a little confusing for the students at first, but got better as it went along.

Table 21. Effectiveness of Lesson 3: *Conducting a Scientific Investigation* Materials in achieving Learning Outcomes

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. Students should be able to formulate testable questions and conduct an investigation.	0	0	0	11.1	66.7	22.2	5.11	.60
2. Students should be able to use graphs and data tables to analyze and interpret data.	0	0	0	11.1	22.2	66.7	5.56	.73
3. Students should be able to develop explanations and predictions based on evidence.	0	0	11.1	0	44.4	44.4	5.22	.92

Comments:

Again, I feel my students will require more practice. This is fairly abstract for 12 year olds.
This lesson hit the mark with all the outcomes. It also helped teach the students how to transfer the information they found, evidence they collected and observations they made onto an investigative report form. This can be difficult for many of my students and by the end I think they were impressed with themselves and the copious amounts of data they had collected and were able to report on their forms. Each day the students did a great job coming up with the next testable question and also were very good at determining what might be provided in the way of evidence the next day. I was amazed how well the students were able to understand the data provided. It took a little time for them to figure out the percentages on the attendance chart. It provided an opportunity to review the math skill need to get a percentage and determine how many students the % represented. Originally, I thought there might be too much information because my kids usually only analyze one piece of data at a time but they rose to the challenge and did a terrific job wading through everything.
Especially if they chose the topic.
Students asked good testable questions based on the previous activity on known data - However, sometimes their questions were not answerable with the data provided at the next phase. I had to allow the creation of new questions, based on the available information. See overall comments.
The lesson was set up very systematically, making it easy for the students to follow the pattern of question, evidence, analysis, next question.
The students really liked interpreting the graphs.

Table 22. Website for Lesson 3: *Conducting a Scientific Investigation*

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The students were able to navigate easily through the website without confusion.	0	0	12.5	12.5	62.5	12.5	4.75	.89
2. The website aided in comprehension of the lesson.	0	0	14.3	0	14.3	71.4	5.43	1.13
3. The website made the lesson interesting for students.	0	0	0	0	14.3	85.7	5.86	.38

Comments:

See technical comments below.
The size of the data tables, etc. Was a little frustrating, but I don't think it could be accomplished differently. My students seemed to work with it without extreme difficulty.
The website gave the entire investigating a feeling of authenticity and reality. The students felt like they were really a part of the health department. They enjoyed role playing, getting memos via email daily from the director and having me serve in a supervisor capacity instead of being the teacher I was more of a guide, asking more questions than providing answers and information.
Students had a difficult time finding the 1st page to switch between the three activities. They kept looking for a link to send them back.
They loved it! Most believed it was real ~ they couldn't believe a group of middle school could access the data! Some even tried to do web searches for related content, or look for the schools.
They really enjoyed the web site version of the activity.
I was not able to use the web, sorry.

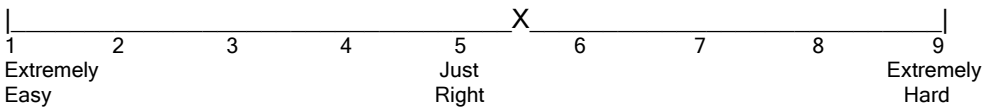
Table 23. Effectiveness of Activities in Lesson 3: *Conducting a Scientific Investigation*

	Very Ineffective 1	Ineffective 2	Mod. Ineffective 3	Mod. Effective 4	Effective 5	Very Effective 6	Mean	Std. Dev.
1. Overall, **Lesson 3: Conducting a Scientific Investigation** was	0	0	0	0	25.0	75.0	5.75	.46

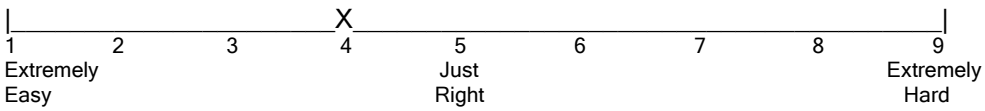
Comments:

By the 2nd activity the students were writing down more evidence. Students don't realize that food poisoning is not contagious.
The appearance of the website & data represented was very realistic - it really caused the students to get involved!
The students were in a hurry to get to class and begin each day. They were excited about the information that showed up in the daily email memos and attachments. They early waded through lots of data, collected evidence, gathered information and drew new conclusions. Each day the students were able to come up with new questions and directions to go in for the next days investigation. At the end, they wanted to know what actually happened to the students! DO TELL!!
Students really enjoyed the computer aspect.
The concept drew students into the problem.
They enjoyed the aspect of having to "solve" the absence problem - they could relate to the school situation.

Lesson 3: *Conducting a Scientific Investigation* Difficulty for the Student as Rated by Teachers. The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 3 difficulty mean = 5.56, std. dev. = .88.



Lesson 3: *Conducting a Scientific Investigation* Difficulty for the Teachers (i.e. preparation, delivery, etc.). The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 3 difficulty mean =4.00, std. dev. = 1.58.



Comments:

Technical: The graph for P.E. absences does not have a red average absence line. There should be a link at the end of each activity so the students can go directly back to the page that lists the 3 activities. There were too many oral instructions to give in a computer lab setting. I felt like I was shouting to give the students the next set of directions. I think a student sheet with instructions similar to the teacher directions to set beside their computer would be helpful.
This lesson was challenging and engaging. I liked the variety of ways the students could find the "student absentee" data (tables & graphs).
Perfect - I had a great time with this and was so pleased to see my students excited despite learning - it is rare! I am looking for more interactive lessons now! I thought the master 3.7a was going to changed from "flu" to stomach virus or a virus. This change was not made on the quotes from interviews that I received. My kids were quick to notice that the use of the term "Flu" was an opinion or personal belief and not to be regarded as fact. I discussed my above comment with Mark on his visit and he explained that you hope was that students would recognize that this was an opinion and they did! :-)
Students had a difficult time using the Master 3.1 Investigative Report Form - they didn't understand the 2nd section, thought it made more sense to combine the 2nd & 3rd section, thought just listing data (evidence) used & then listing it again with what they found was twice the work. Most did an excellent job on analyzing the evidence & formulating testable questions. Students were most frustrated that they had such limited access to data. When they were asked what they would have liked to see & analyze, they were all easily able to generate a list.
Students seemed determined to find the "right" answer. They really accepted the possibility of both the swimming water and the chicken as the reason for the illnesses. I assumed they would be frustrated with the result being torn between the two possibilities, but instead they merged the two into one answer. Most were able to navigate the web site with limited assistance. Many asked if it was a "real" site! Great job with the site.
Error: In table of activities, Student T17 is listed twice w/ different activities, but is actually on vacation. This lesson was a hit, the kids really enjoyed it. Their interest & enthusiasm was obvious from their discussions. In addition, it looked great to have these kids all so engrossed in an activity when the directors of our school brought around prospective students parents (kudos for me...thanks!) The restaurant inspections were a very good red herring. My students really believed the kids were sick because they had eaten at one of the places on the inspection page. I believe more extraneous yet related data might need to be available. Personally, I think it is ok for my students to have unsuccessful investigations & if one student wants to follow an idea about the other schools, for example, The band schedule should include all 4 schools, then they should be able to do so. However, I am also aware that with limited time available to do this in the classroom, we need to lead students toward the final answers. Would it be possible to have more pages available on the school district site? Another tid bit of ino that got their curiosity up was the West Nile Virus alert on the Health Department page...some students were sure that must be the cause of the illness; they they got to learn a little bit about West Nile Virus.
For some reason, it took a lot less time to do the web version than the non-web version. Perhaps, it was due to having to pass handouts. Also, I think some of the handouts could have been a bit clearer. First of all, the Activity map should have had a solid line for one school and dotted for the other on the map that showed both Truman & Jackson. It would have been clearer to figure out which figures represented students from which school. Also, on the activity table, it was hard to see the shaded area, so the students were confused as to which were the sick ones and which were healthy until I pointed them out. I think the students really enjoyed the web version. The attendance data was a little easier to examine on the web since they were able to look at only four at a time.
This was interesting to the students because it made them think logically which many teachers do not foster.

Table 24. Total Number of Class Periods spent on Lesson 3: Conducting a Scientific Investigation

	1	2	3	4	5	Mean	Std. Dev.
Class periods spent on Lesson 3	33.3	11.1	55.6	0	0	2.22	.98

Comments:

This was a really intriguing investigation. It was so "real life" that the students really felt like part of an investigation team and everyone (amazing) participated. That was what thrilled me the most, kids that are just not interested in school became part of the process - that happens so rarely. There are a lot of apathetic kids out there that are difficult to motivate and it is cutting edge innovative curriculum like this that maybe able to get them re-engaged with the learning process. I am pleased to have been chosen to field test this and hope I can work with you again in the future being part of creating such a wonderful teaching tool. The best part of conducting this investigation for me as the teacher was that all students were totally engaged in this lesson. It was great to look out over the groups and see everyone so engrossed in the investigation. Even students that never participate were absolutely entranced by the activities. They loved using our wireless laptop computers and looked forward to coming to class. I have decided to make it a top priority to find more lessons that the students can work on using the computers in such a fun interacting way. * Another really great aspect of this was that I could have students that were absent for the week due to illness and allergies conduct their investigations from home - that was a wonderful experience. I had 2 students send their evidence and new questions to me online. They appreciated being included even though they could not join us physically. (During the implementation of the field test a virus roam rampant through the school, we had a day with 33% absenteeism - that is why this is delayed. Sorry)
A side note: During the week after we finished the investigation there was a news story about a grade school in our state which had 80 students & 6 teachers get sick on one day & the health dept. called in to investigate. My students all were making suggestions as to what the investigators should check out. :-) Students also wanted to know why data was given for on the 7th grade - was this just a 7th grade level? Were the other classes only 7th grade classes & why didn't the numbers add up to the entire class?
Room 308 did web version other 4 did handout version

Lesson 3: Student Results

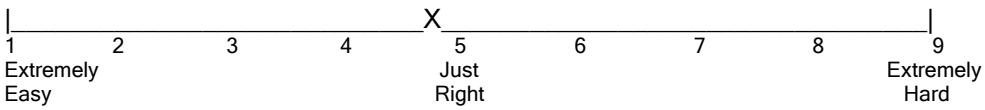
Table 25. General Questions on Lesson 3: *Conducting a Scientific Investigation*

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The lesson was interesting.	4.6	5.8	8.8	17.2	31.9	31.7	4.61	1.39
2. I could read the material easily	1.1	2.5	8.3	18.8	41.3	28.0	4.81	1.08
3. I could understand the examples and explanations.	1.2	2.9	6.9	19.5	44.0	25.4	4.78	1.07
4. The lesson made me think about new things and questions.	5.4	6.4	8.4	18.9	35.4	25.4	4.49	1.40
5. I could understand the scientific information easily.	1.9	3.0	9.3	17.7	41.4	26.6	4.73	1.15

Table 26. Lesson 3: *Conducting a Scientific Investigation*

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. I was able to navigate easily in the website without confusion.	1.7	5.0	10.5	13.9	34.4	34.5	4.78	1.26
2. The website helped me understand how to conduct scientific investigations.	2.3	5.0	8.8	27.0	37.8	19.1	4.50	1.18
3. The website made the lesson more interesting.	3.0	3.3	6.7	17.3	30.8	38.9	4.86	1.26

Lesson 3: *Conducting a Scientific Investigation* Difficulty.
The scale used for the difficulty of each lesson line across the page with three easily identifiable equidistant points for the students to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 3 difficulty mean = 4.77d. dev. = 1.69



Student comments on Lesson 3:

Some of the maps on the website were confusing
It was fun.
The website was great!
I think it is more interesting when using the website.
Don't have an answer for #3 sorry!
It was very interesting
It was a fun project.
It was hard overall.
It was too long & we had too much time to do it. My group could've finished in 2-2 1/2 days, but we had bout 4
I didn't really like it.
I didn't understand some of the graphs
I really liked this lesson.
I wished I could have worked by myself because my partner hogged the computer.
I liked the map of where the kids went. I liked that it gave you lots of evidence.
The website was very interesting. I wanted to know what the answers to this investigation, this was very interesting.
I liked working with a partner.
The class was too short and I didn't like not getting the answer. I did think this was fun though and I had a very easy time making new questions.
Using the website made this lesson easy.
My favorite part of Lesson 3 was Unusual Absences. The material was easily read and carefully shown. Also, the website helped a lot with the information.
I think that lesson three was wonderful. I liked how we could work with a team and communicate with other people and not by myself. I like to hear what other people have to hear and what other people think.
This lesson was good to me because of the way we had to investigate the data. And I also liked to be on the computers for three days in a row. The lesson was easy to understand.
I liked it was very interesting. The computers made it a little more interesting.
I think the website was wicked fun and was easy, also it helped me a lot and understand it easier.
I liked going on the computers. There were a lot of kids were sick.
I liked going on the computer. It was fun, I didn't like not solving the investigation.
I thought that the website made it really interesting and it made it more fun and I looked forward to going to science.
I think it was fun looking at other peoples schools. I also think it's cool how they showed us the interviews and were they went. They told us what happened to the students. I think it was cool and it was easier to work with a partner.
I think this lesson was kind of boring. I liked the other 2 lessons that we did.
I like this lesson. It was interesting, but I didn't like to not know the answer. I thought the website made it more interesting.
The website was kind of confusing because of the scientific words, but I did like it. Plus, the website kinda made the mystery more interesting.
I would have made the answer at the end of the investigation. It was fun though. I liked how we had to put together the info.
I like to work as a team because we had different opinions. The first day was not that interesting because all we got was a letter. As we went along, it was really cool to see how it really works.
I loved this lesson because it was fun trying to find out what caused the sickness.
This activity was fun, I enjoyed using the charts and graphs and the pictures to figure out the source and cause.
This was fun and I hope we could do something else like this.
This lesson was very interesting. I liked using the lap tops. I easily could read the materials.
I liked working as a group. This was one of the best weeks out of this year so far. I learned how to take a scientific inquiry seriously. I liked working with the computers.
This was a fun lesson. It always had me guessing. The website was also easy and had a good source of information.
This was fun on the computer. It was fun as a team. I liked doing the investigation.
I like having to work in groups using the computer was better and funner. I didn't like not knowing what was the problem.
I think that we should have had our own computer, not partners. There should be another part to this. It should have been another day longer.
The website was the most interesting thing ever. The materials weren't that interesting as the site.
This was a really interesting thing to do. It felt like we were a scientist for a couple of days.
I thought that this was very interesting. I just wish that I was given the true answer! * I wasn't in school for activity

#3.
I really loved this because at first it was not that easy and I wrote a little for my investigation but I noticed that I started liking it and wrote a lot.
The first day, I had trouble finding the memo. I thought about many questions. It was fun, however.
The website was more interesting. The information was easy to understand. We took turns with the computers. There were clear explanations.
I think that it was fun to do an experiment online. I love to use computers and while on them, I could see more info, so I asked myself more questions. It even helped me on how to investigate so I learned what I was doing.
I liked this lesson a lot. Even though I didn't get to use the computer. I had fun because I didn't really want to use the computer.
The website made the lesson more interesting because we got to see how you find things out. The lesson was interesting because it taught you how to investigate.
I really liked this lesson. I thought everything was clear. I like working on the website I thought it was fun.
The website was easy to understand and it made the investigation a lot more interesting. It would have been boring and dull without it.
I liked using the worksheet to remember the information. It was very clear and fun. Working in pairs was fun because you got two opinions. The website was a good idea.
The lesson was interesting. Being in a group was okay. I got to use the computer as well as my team.
The website was very easy to navigate. I found it easier to work alone.
The computer made the lesson more interesting because I am good at using computers. I didn't really like this lesson because I'm not too good at using graphs and I couldn't really understand it.
My partner was absent a lot so, I did good by myself. This was an easy lesson and I did most of it by myself.
I think working on the computers because there was color on the graphs. I also liked working with a partner.
The website was very well made but I think that the link to the memos was out of the view when you came on. I thought the spread sheet was confusing as well. I wasn't here for activity 3.
It would have been better if I could have worked alone because my partner was hugging the computer the whole time, but I found the materials easy to do.
I didn't get to do the computer. I don't really know if it is easy to navigate it, but it looks sort of easy.
Bath lessons were interesting. I hope we do more of these kinds of investigations. All of the information was clear.
My partner did not get the website on the first day, so I got and she complained everyday. This whole investigation was awesome! The fact of using the computers helped a whole lot.
The website gave a lot of information. You had to make questions and get information.
I think that it was fun and we learned too. I liked this experiment and I thought it was great. I would love to be able to do this and I wish we could choose partners.
This was so much fun and want to use the computer more often.
My comment are only about Lessons 2 & 3. The website was interesting and made it more fun.
I was here everyday so I could easily understand the questions. Other things is that my partner didn't want to do anything.
I thought it was good that it was on a computer because doing it out of a textbook would've been boring, but this made it interesting. Also, doing this on a website helped me to understand more.
I liked using the computers. I think we should do more of these. This was an exciting investigation. I liked working in groups.
I would rather work alone. I thought the website was cool and looked real.
The website made the lesson more interesting and fun. I wish we could do another one again, but about a different thing than water alert or when they were getting sick.
The website was fun. I want to do something like that again.
I thought that the lesson was interesting. I wish we had a little more computer time for it, but I liked finding how they got sick and everything else and I wanted to be solo.
I liked this lesson. It was very interesting.
I do not like it when we used the websites because my partner did not give a chance to investigate, but I had no confusion. I would have like to have been solo.
I felt like helping my team mate so some of it was so easy.
I loved this lesson. It was fun and I just wanted to keep looking for more clues. I think it's the kind of activity a lot of people will like. This lesson was great and I'll admit, I was a computer hog. LOL :-)
I was very happy that I could use my hands and not writing, so I had fun. I was very happy and I feel that I was a real scientist.
The lesson was ok. It wasn't that fun. The website was interesting. It was easier because of the memos. I didn't like working with a group.
I think this whole lesson was a fun deal. Also, it made me feel I was really doing it.
I never liked this project, I don't like this.
I liked the survey's it's cool.
I like that the website showed us all the information in graphs, charts and pictures. So, it was easier to see, read, and understand. I liked working with other kids.
I was able to navigate easily in the website which is good. The website also made this lesson more interesting because it seemed so real.
The lesson was very easy to see the difference between the schools. It felt real and it was the best lesson.
The graph was easy to read, but the maps were the best. The maps showed us what the sick and not sick kids did. The graphs and charts were not as helpful.
The website was the best to have good information and was really useful.
I think the website was cool. It looked real. Also, the process of going through all the different steps were cool.
It was a very good lesson. The website was realistic. It was also a lot of information and the graphs and charts were easy to read.
This assignment was too long and boring. I understood it well, but there was too much stuff.
This lesson had graphs and things that made this easy. I liked the charts on sick and well kids.
I enjoyed this activity. I liked the memos because they told you symptoms and it seemed real. The maps confused me a little.
On activity 1, put a 5 on statement 5 because I didn't

understand how they got the absentees. The website though was better than the writing.
The lesson really didn't make me think about new questions because I just wanted to get through it. The website made the lesson a lot more interesting because it gave me more evidence.
I really liked looking at the map because it was easy to read. I liked that they showed what the sick did and what the well kids did.
The maps were very helpful. It was easy to understand the information.
The graphs made the information easier to understand.
Doing the website was fun, but when we ended without knowing the answer that bugged me.
I loved this lesson. It was very interesting! I think I could have worked by myself though instead of without a partner. The graphs were nice and easy to read.
The graphs were kind of hard to read and the map was probably the best thing to get information. I liked working with a partner because it is much easier.
The lesson was great and it was well made. It was constructed in a good way. It look like real life.
The website really helped me a lot.
This class work activity was interesting and I think that this detective work can be my career.
The website didn't really help me to understand how to conduct scientific investigations.
It could've been a little harder.
I really thought it was confusing.
I was lost in the website!
This was good fun and hands on experience.
I liked the website - it was very realistic. It made the lesson more interesting.
I really liked the website.
I really liked how the website gave you clues that led to the answer, it was very interesting.

Try to make the information on the website on less links
The website wasn't that exciting.
it was fun and interesting and made me think.
More information could be on the website. (i.e., past year illness, every restaurant in the surrounding area, etc.)
Certain places in the schools websites were not available, and that it made the researching more difficult.
The website was very helpful when gathering evidence to solve the problem.
(Some as past two)
I found a "typo" in one of the student data tables. Student T17 or J17 (not sure which) was listed more than once with conflicting information.
It was nice how the website was easy to navigate
Using a web page was good because you could go back to previous information if you had a question, and it was more interesting than other ways would have been.
Excellent!
Handouts
We did not do this.
Don't know cause I never been to the site
Did not do
No website stupid.
For a keep it like that
Add more ninja stories
Handouts
Worksheets
Handouts
Handouts
No website, just handouts
I thought this lesson was the best
Memos from director
Too bad I didn't go on the website.
We didn't do that

What did you like most about Lesson 3?

We got to use the computer
We got to work in groups
Seeing what's happening to these schools
Searching for schools
We got to work on the computer
To find out what was going on in different schools
The data graphs
The leading clues
I liked being a detective.
Going on the website & doing those packets
That I could work with someone
Do not have to do homework
Conducting questions and answering them.
Going through the info on the internet.
Can't say, was not here
Getting to go the computer lab.
Nothing
It got a little easier than the other ones.
That you had to think more to get your testable questions.
How it made your brain think for once :-) Just kidding.
How you had to analyze the data.

What I like the most was getting on the website and investing the local Middle Schools.
That we got to go on the internet and do it.
We got to go on the internet.
Using the website
The computer
That we had to find out what caused the absences.
Going online to find the answer.
That we did not get so much homework.
Looking at the calendars and other information.
Being able to figure out how people got sick at schools.
We got to use the computers
It was fun.
It gave us the caused of the illness.
It was exciting
That we had partners
Figuring out the sickness
It was fun and I learned a lot.
Finding out what caused the illness
It was fun to try and figure out the questions.
I liked the diagram were they showed us the school and

restaurants.
Investigating the outbreak.
My partner
Using the computer
I got to work with my friends
I think it was fun and made me feel like a detective.
I thought it was fun, another reason is because I enjoy going to the computer lab.
Everything
Being in the computer lab and investigating
We got to work in groups.
Looking on the website
I liked doing the investigation work.
What I like the most is getting to work on the computer.
I like how my grades went up
Looking at the graphs to find the evidence.
The charts and looking at all the information.
I liked trying to figure it out.
Researching on what happened to the students.
I like getting on the internet.
Figuring out the answer.
It was on the internet
Using the computer and the web
We got to go on the computer
The absences in four schools.
Having to look around
Working out of the classroom and in to the computer lab.
I liked it when we had to find out how the kids got sick.
It was easy
It was out of the classroom
I liked looking over the charts
I liked all the data given to us that helped.
It was fun to find out what caused the illnesses.
That we got to use computers and look at a lot of different things.
Playing the role of the health department.
I liked working to try and find out what caused the kids to get sick.
I liked it because it was fun
It was interesting
Working to help find the cause of the absences
Going on the computer and trying to figure out what was going on at the schools.
Looking for evidence
No homework
It was different for a change.
Finding the answer to the problem.
Trying to figure out what the disease was
The websites
It was fun
Looking at the information
The websites
It was on the computer
Everything
I liked when you got to make testable questions and tried them out
I liked that you got to find the stuff out rather than knowing all of it right away.
I liked going through the website and evidence.
Finding out how the outbreak happened
I liked how we had to find out information, it was fun.
When we tried to find out what was going on

Going on the website
Everything
We got to try to figure out what caused the kids to get sick.
Saying cheap chicken hut really fast.
All of it
Everything
I liked trying to figure out what the disease was and how it was spread.
I liked reading the messages and solving the mystery and reading the story.
Computer
I liked figuring out what the problem was.
You got to be investigators and try to solve a mystery
We got to use the internet
Everything
It was fun
Using the computer
It was fun trying to see what happened
That we got to work on the computer.
Looking at the graphs and determining what was going on.
That it gave me the opportunity to show me what his career is all about.
Being out of class and on the web.
Well just when we had to find out what the disease was.
That we got to use the computers.
You had partner to work with to help you on stuff and that it was on a website.
Being on the computer and not in a class room being bored
It has a real life problem.
I could put myself in the "shoes" of a Community Health Department Scientist and had to had the opportunity to think like a Community Health Department Scientist.
It felt like my group and I were professionals. It was fun trying to come up answers.
It was interesting
That we had to figure out what the problem was.
I liked the internet
Nothing
I liked that we got to use the internet to search for evidence.
Finding out the answers
I liked going on the computer.
Looking on the website
Interesting
The internet research
It made you think of questions to ask
That it was online
We had roles to play, as if it were in real life.
Everyone got to do it a different way
I liked figuring out what was happening, the results of the activities.
Challenging cause I did not know what happened
freedom to use the internet
It was fun.
That we got to use the computers.
It was fun!
Searching information on the web.
The websites information was easy to read.
That we got to figure out for ourselves what the problem was
we used computers
It was easy.

we used computers
To find out more about this unusual illness and build up more questions.
I had a partner
The fact that we had to investigate what happened to the students and there was an actual website with the info we needed.
finding information about the schools
I liked the website
We were able to use a computer.
nothing really I didn't like it or dislike it
The information was all there that we needed
It was kind of fun
the part were we had to do the work to understand
It was cool to investigate and go look and charts and numbers.
I liked how we got to use real technology.
You kept on having to ask questions to find out the answers.
That we had to investigate the cause of this sickness.
using computers
It really made you work, think and it built up suspense and lots of questions.
Fun to work w/other people
We got to be in groups and help each other a little!
I just thought it was fun and interesting to try to solve why all of these kids were absent.
That you had to figure the whole thing out with only the computer to help you.
I really felt like a scientist/investigator trying to find out what happened
it was easy
It was fun
It was somewhat fun
Having ideas from other people
That it was computers
gathering the info
guess I liked the computer
It was interesting
We got to use the internet and work with partners
it was easy
It was not that difficult.
trying to see how they got sick
Going on the website to find out information.
it was cool
We got to use computers
The way we worked together and how it problem lead to another.
I had actual data to go by.
Website
I liked the challenge
It was fun, we worked together as a team. I learned new things.
the website
It was kind of fun
The website
that we looked at the absences of there schools
The things we learned.
We got to work in groups, to figure out what's going on like detectives.
I liked the more free approach we were not guided down a new path and told a definite answer
I got to work with people I like

We got to play around with realistic evidence
Being in groups.
I got to work in a group and we got to use a computer
That we could have a group.
finding so many possible questions and answers at the end.
You had a chance to use everything you've learned in an actual experiment.
Internet
Trying to find what the kids had
It was challenging
We got to go online and work at our own pace and decide what we wanted to do.
We had enough information to work with.
That we got to research and look for clues on what happened to the students.
It was interesting to look at all the data.
The website
Finding out what might have caused the kids to get sick.
Using the website
It was fun taking notes.
It made me branch out from the normal questions I ask.
It was a real situation
Being able to look for evidence on the internet.
the website was really helpful
Using the computers made it more fun.
the use of the internet
It was a good brain teaser on where they ate at.
It was challenging and required me to think and plan out.
going on the web and finding out the symptoms
Thinking of possible diseases involved with the absences
The site was neat and it was a real life situation
It was like a real live situation, which made me feel like I was actually doing it as a real scientist.
it made/forced me to think about new ideas/ different explanations
Working together and finding out what the problem was.
Challenging
I liked it when we had to look at how many students were absent and we had to find out what made them absent.
we had enough time to do what we needed
We got to go on computers
that we were able to work with other people & the challenge of this lesson.
Got to get on the internet
My most part was working in a group with girls
My favorite part was everything! It was so much fun!
I liked working on the web.
Everything because we got to get on the website which was nice and we got to solve an investigation and we got to ask testable questions.
Everything
working in a group
My favorite things about this lesson is when we got on the computer and tried to solve new problems.
I liked working on the computer. I liked working in groups.
We had to work together to find the answer.
Working in groups
Working in groups and on the computer
I liked getting on the computers.
I liked working on computers
We got to work in groups and on computers.
That we got to work on the computer.

Working in groups and being on the computer.
Getting to work on computers was what I liked most in this lesson.
You have to do this activity on computer.
When we were on the computer being a health detective.
I liked the part were we had to find the evidence?
Working on the computer
I liked the website
I liked getting to work on the computer and getting investigate cases.
I liked the part when you had to read the problem.
I liked getting on the computers.
We got to work on the computers.
What I liked most was that we got to see charts and I think that it really helped.
We acted like detectives.
because it was fun
We had to work together in groups & working on the computer.
I liked having to explore the web to find answers.
Using the computers made it more fun.
This lesson gave lots of clues and evidence to make explanations. It was not too hard or easy. It required the right amount of thinking.
We got to work on a computer.
I liked most about this is that we were on the internet
Being able to work on the website.
The question and information was easy.
I liked working on the computers.
Being in a group
Looking at some type of evidence.
I liked working on the computers.
I liked using the computer
We got to get on the computer?
I liked doing the investigation. I liked doing those things.
I liked when we went on the computer.
I also liked how at the end it left you hanging and you didn't know the answer.
It was very interesting, it was fun and it helped me understand the scientific method.
I liked using the computers. I liked trying to figure out why there was unusual absences.
Using the computers to use the website. The lesson made me think of a lot of testable / not testable questions.
I liked using the website. I also liked using the maps on the website.
My favorite thing about Lesson 3 is the study of the absences. The material was easily understood and well-known. Also the Scientific info I liked that we tested investigations.
What I liked most about this lesson was when we got to go on the website and investigate with a partner. I also liked how the website made this investigation more interesting.
What I liked the most about this lesson is to investigate and be a scientists.
I liked that we could use the computers instead of using paper.
I think it was really cool and easy, it was understandable. I liked looking for the evidence, I needed to solve the mystery.
I liked going on the computers. It was cool, we got to guess.
I liked going on the computers. It was fun and cool.

I liked going on the computer, I liked when we got to go to the different websites.
I liked being able to go on the internet. I liked seeing all the interviews and maps.
I like it because it was a group project and we got to use a computer. Also how we would get letters everyday and the charts and tables. It was very interesting.
That I got to use a computer. I also learned how to solve mysteries. Also, I learned that I can go on those sites to get practice for that kind of stuff.
I liked how we had to gather information. I also liked how we had to decide who was sick and what they did. I liked how we got the maps to help us find were the sick kids at and if they went swimming.
I liked the maps when it showed us where they all went. I liked how we look at all of the interviews. I liked how we got to see the percentage on how many people were out!
I loved how we got to go on the computers and try to find out the mystery on how many people were absent and why?
I really liked using the computer. I liked trying to figure out the source with the graphs and stuff.
I liked working with partners. I liked working with the computers. I also liked working on this far more than 1 day.
What I liked most about this lesson was using the lap tops. I also liked all the information we got and trying to figure these things out. I also liked how fun it was and there was no homework.
What I liked most about this investigation because I liked the computers and doing the investigation with other group and I liked how to learn how to investigate.
I liked the fact that we worked as a group. I also like trying to solve this fun mystery. It was interesting working with the computer. My group took this seriously also.
I liked this lesson because it wasn't confusing at all. It had good sources of information and it was a good mystery to solve.
I liked the computers. I liked the graphs. It was fun to do the investigation.
I liked using the computers. Working in groups was better. I liked how they said we had the emails at the site and the side made it more interesting.
That we got to use computers. That it was fun. You had to try to solve it.
The thing that I liked most about the lesson is that I was able to work with Jacob without having to talk loud. I also liked that I didn't have to talk much.
What I liked most about this lessons was that it was fun. I also liked that we got to actually work with something real.
I liked that this was a mystery and that it wasn't too easy or too hard. I believe that this lesson is great on computers and hope that it continues to stay on the computers. I also liked working in groups of two or 3.
I like when we had to solve the absence and how many student were absent on different days and what was the symptoms and how we can test the sickness.
I liked the experiment of the project. It was very interesting. I looked forward to finding out what was the source. I was really excited to come to class.
I liked that we were able to figure out about why the students were sick. We also were able to use the lap tops. This was an exciting lesson.
What I liked most is that we were able to try to solve a real

investigation. We even found what probably the cause of the all the diseases. If it was fake, I don't think I would have had as much fun.
I liked trying to figure out what was the cause. I like looking at all of the graphs and the symptoms. For once, I was actually glad to come to class and do the work.
I liked most about this lesson was the fact that we got to look at graphs or schedules. I liked the fact I was more excited about coming to science. It was a wonderful experience to be presented with.
I really liked everything. I liked that it let us feel like a detective. This made me excited to come to class.
I liked how it made me think harder than I normally do. I also enjoyed getting to take part in an investigation.
What I liked most about this lesson was the website because it brought the case to life. I liked the way that each day you got new information. It was colorful and fun. I liked coming to science.
I liked that I got to be like a real scientists. This lesson got me excited that's what I liked.
It was easy to navigate the website. It was easy to understand. It was interesting.
I liked using the computer because I am good at computers and playing around with some testable questions. I was excited to come to class to use the computer.
I liked this lesson the most and it was easy to do which is good for me. Also, I liked it because I got to use the computers.
The best thing I liked was using the lap tops. I also liked using my investigation skills. One more thing was it was pretty exciting.
I thought that this lesson was very well made. Having it online was a nice addition. The graphs, videos and charts were very helpful.
I liked being able to use the computer because if we didn't, I don't think it would be any fun just looking at papers.
I liked when we found out the results and found out we were right…I liked looking at the graphs and the interviews of the parents….
I liked searching through the maps and reading the comments from the parents. Also, I liked not knowing what was the cause because I think it keeps it interesting.
This was my favorite lesson. This lesson had a great learning curve. It made us think for different reasons everyday.
The website gave a lot of information. Easy to read not hard to find out.
I liked it because it was fun and I got to feel like I was actually on the Health team.
I liked that we got to go on the computer. When I saw different memos, I thought of different questions. Everything is clear and I loved working with partners.
The thing I liked the most was that when we saw who went where and who was sick. It was interesting. I liked working with a group.
What I liked about this is that it was interesting. I also liked working in a group.
I liked that it made me think a lot and try and sort out all the information given in these days. It was very challenging and the computers made it much easier.
I liked the computers. I also liked the website and investigations.
There was not much homework
I liked the part when we tried to figure out what made the

kids sick. I liked when we went on to another activity like from Activity #1 to Activity #2. I liked working in a group.
I liked going on to the computer and how my brain actually worked.
Using the internet and when we had to look and figure the clues out. I liked it because it was like a real website.
I liked the website the best. I liked the band. I liked working in a group.
I only liked it when we did the computers a little bit but that was it. Also, I liked the new questions at the end of the day.
Student Absents
I found it quite fun and easy. I loved that we got to use the computers for the lesson and not just paper and pencil. It was more exciting.
I liked the graphs and all the stuff was so cool and real. I was happy and I loved the computer and I had so much fun. I liked working with a group, it was a lot easier.
I liked to go onto the computer. It was easier with the computers. I also liked being challenged with the information.
That you feel like you were actually part of the health department.
Nothing about this section
My comments are about 2-3. I was not here on the first day. It was fun when we looked at the charts.
I liked the fact that the activity was challenging. I also liked working with other kids and the class to hear everyone else's thoughts. The activity was also very interesting which made me very focused on the project.
The thing I liked was the fact that it all seemed so real. I also liked that they had interviews with the sick kids parents. That made it seem that much more believable. I also like that we were in groups.
The thing that I like most about the lesson was that, it was easy to follow and easy to read. Also, it was really fun to do and I think we should do it again. There was a lot of good information. I like work as a group.
The best thing about this lesson was we got to work in groups and we got to go on the internet. This lesson was most hands on and that was the best. It felt like it was real and were scientists.
Doing the stuff on the website was fun. It was more hands on and it was better. It was really a nice website.
I liked the fact that they gave us memos and the website looked real the most. I also liked to see what all the kids did. I wish it would have gone longer. I liked working as a team.
I liked that it was on the computer. I also liked that they save you maps and absentee notices.
What I liked most about this assignment was that, it was somewhat easy.
I liked the graphs. The charts were helpful. The maps helped explain the charts. The investigation was fun. I like solving things.
I liked the fact that we got to use the website because it helped me understand what we were doing and it wasn't boring. It was fun going on the computer because it isn't that fun when you just write.
I liked most the part that made it look like a real website. I also liked getting the memos.
I liked the fact of being able to use the computers on this lesson. I also liked having to figure out what happened to the children. The last thing that I liked was having the

challenge of trying to figure it out.
I liked how the lesson looked like it was really happening. The memos were like we were really health inspectors. It made us think we were in the group for real. I liked working in a group because there's more than my point of view. I liked that we were able to use computers.
I liked most about this lesson was using the computers. Also, the information. I liked how going to the site and feeling it be real. I wished it continued.
I liked how we had to figure out why the students got sick by going to a restaurant.
I liked when we worked on the computer.
I loved solving the crimes and gathering information about the illness and the absences. I liked how we had graphs and attendance sheets.
I liked when I got to see how the kids got sick and their illness. I think it was kinda hard one but that's how I like it and I like it cause I like to solve mysteries.
I like the way it was set up. I liked it very much that it graph and charts. Last thing, I liked were the interviews.
All of it, the part I really liked was seeing what activities they did.
Getting online and looking at various information.
We had the info right there, we didn't have to do any tests on people.
We got to use the internet, which I think is easier to get information on.
I liked that we got to act like detectives or scientists because we had to find out what is ….and causes.
I liked going on the website and trying to solve the disease.
I liked when we got to go to the computer lab and trying to do the….
I liked being able to go at my own pace.
I liked solving & thinking of clues. Internet on website.
I liked using the website to look for information a lot.
learning that the disease could be spread through the water
Going on the internet and using the computer was the easiest.
I liked how we could use the internet
Answering what questions we had about it. (The last question)
1st part
I liked that we were in the computer lab.
Navigating through the website
looking at all the graphs and trying to figure out who started it and what cause
internet
What I liked most was finally being able to figure it out.
I like that we could go on the internet and find details.
I got to work with a partner
It was pretty interesting
Trying to find out why the people were absent.
On the computer thing
I liked that it was really easy to understand.
I liked going to the lab
Investigating the people's symptoms
I liked how it made me feel like a real doctor, investigating and finding sickness.
I liked having the graphs
It was different.
It wasn't too hard. Part 3 was good.
That we were online and we were by ourselves
It gave you all the answers so you just had to copy off the site.
Searching for answers
I liked the website
I liked how we had to investigate three times to figure out everything & get the answer.
I liked most about this lesson that there were clues along the way to try to crack the case. It was very interesting and surprising.
I liked how we got to use the computers because that was a lot more fun than sitting in a class.
Surfing the website
That we got to be health technicians and find out what was really happening
The part I liked most about this lesson would be finding out the solution and learning something new.
I liked answering the questions and I liked when my team mates looked on the internet.
I liked how this lesson made me think of new questions to ask.
I like when you have to look for the website and look for the thing you are looking for.
used computers
It was an interesting idea and investigation.
I liked how we got to go to the computer lab and be "detectives".
Figuring out things.
The website
That we had to go to the computer lab.
The way we had to go into the computer and be on the internet
I liked that we had to figure stuff out on our own that we had to guess a little.
The graphs
We got to work on the computer
Using the internet
The website and graphs
We got to use a computer
I liked that you could think about what was causing it.
I liked how the website was set up so we felt like we actually worked there.
figuring everything out
Going online
The internet
Getting on the computers.
The website
Trying to find information.
The fact that they built an interactive website for the investigation.
I liked the charts and graphs
That we got to conduct our own scientific investigation.
I liked the website
You got to go on the internet
The difficultness of the lesson.
Searching the web
The website that provided a lot of info.
It was on a computer.
Seeing the evidence.
fun to search around online
The interactive
It was more hands on than previous lessons.
The lesson was really cool. It was interesting because of the website. I liked the whole format of the lesson.
It was interesting to try to figure out what caused the

sickness.
Being on the computer in partners.
It was on the computer
We got to use the computers.
Being on a computer.
Surfing through the website & collecting "evidence".
It was challenging
I liked being able to use the computer for research rather than just a textbook.
I enjoyed how they made it seem realistic.
You got to play on the computer.
It was easy.
I liked that it had the website as kind of a visual aid, that it made it interesting.
We had to think a little
Everything
It was more interesting than just working with hands out.
We got to use computers
I liked the website
We got onto the computers.
It was on a computer.
Not having to work in a group.
The website and the research
No one was standing over us saying " Now click here".
The fake messages.
The website
The investigation process
I liked getting on the website & trying to find out the cause before I had a lot of information.
I liked that we….
We got to use the computer.
Navigating through the website.
I liked how they arranged the information and made us provide our own conclusion.
I liked getting on the website. It looks like it took lots of preparation to make all of it.
The quality of the website was fun to laugh at.
I liked how we got to explore everything on our own. It was cool trying to figure out the answer.
It was a good topic. It had good information.
Working on the computer was great.
All the research
I liked the questions because I actually wanted to know the answers to them.
Surfing the website
We watched a big screen.
It was like a real investigation.
Getting to use modern technology.
Having to solve the mystery sickness.
Getting to be a detective
We could get on the computer.
We got to use the internet instead of books.
Searching the site
We got to find out what we think happened.
Navigating through the websites trying to find more info.
I liked explaining the evidence because it's like being a detective.
The internet and it was fun.
Having to find the information by yourself.
I liked that it was health related and that there was a website.
Don't really know

Trying to find clues and what they meant.
Getting to have so much evidence and trying to find out the cause.
We got to go on the web
Looking through the information
Investigating
The web
The time in the library.
Going online
Getting on the net
Getting to use computers
Trying to find the cause of the illness.
I liked how real it felt.
It made me feel like a real scientist.
That it was set up like we were the health inspector instead of seeing what the health inspector did.
It was fun to try and find out what the problem at the school was.
The creativity implemented in the creation
I liked discovering possible ways for sickness to spread, and other discoveries.
Being a detective, and learning the problem.
I liked making a chain of testable questions.
The website, it was well put together for a proto type and was very authentic looking.
Try to figure out what the source of "illness" was. I really enjoyed doing the testable questions because they helped me focus.
We were actually finding scientific evidence of what is going on today.
That we were able to use the computers. Also, I liked investigating the subject.
I loved having to figure out the "mystery". It was a lot of fun to explore the website, and find pieces of evidence. I liked all of the clues that lead up to the final answer.
using the computers
The website was the best part of this lesson.
I liked finding out more information about the problem.
The information given on the website made for a FUN activity.
I liked this whole lesson a lot but I really enjoyed the last step of the investigation where all the facts and evidence came together.
The fact that we could gather so much evidence was interesting.
I like how there are many clues, including of which that are not true.
I liked coming up with explanations & gathering info & facts to theorize
It was like solving a mystery.
the interviews
It made us think we had to investigate to create our own theories.
I liked this lesson a lot because we had to do things to find more questions. The questions we asked helped us get a good idea of what made them sick. It was really fun also because we got to do things.
I just liked the whole investigation.
I liked most looking at the evidence on the website.
I liked how you had a series of testable questions to come up with the answers, instead of just one. This made the activity more believable for me.
I liked how it was on computers.

That we got to use computers and it was extremely easy.
The fact that we had to look at the data and figure out the cause of the sickness.
All of it
"Solving" the mystery. Investigating the illness.
more freedom
It was very fun, and we got to solve the problem as if we were Health Dept., workers and we worked on computers.
It really interested me, and it was very fun. It taught me so much about analyzing data, then asking further questions about it.
I liked how in each step we got new information and had to make new testable questions.
I liked trying to figure out what made the people sick.
This lesson helped me learn how to devise a testable question from data.
This was really the best thing in the whole curriculum! It appealed to me because it was a mystery which I love.
I liked going through the hole process of investigating with my group.
How there was a lot of information for us to base our evidence on and to come up with new questions about.
That we got graphs & charts about the students and it felt as if we were really doing.
I Liked the way they made it sound real.
Taught me a skill about how to investigate and observe.
We put our knowledge to the test and we had questions, observation, evidence and a conclusion.
I learned how to solve a problem with visual examples.
I liked learning about how many people were absent in which class because it brought us closer to the answer.
The stuff
What I liked the most about this lesson is pretend to be a health inspector.
When we made questions to help answer the topic question.
I liked how we used a lot of info to find a problem or why people were getting absent.
Using the info for the evidence.
Being an investigator.
I liked the simplicity of this thing.
It was fun
Nothing
Everything
I liked how we tested the questions.
I liked looking at the percentage of kids absent.
Got new investigations
We got to collect evidence
Everything
How we got into conversations
I liked how we found different evidence and shared it
It was sort of interesting how many students were absent
I like when we saw what was wrong with the kids
How we actually got to get on the computers, instead of working in class.
The fact that the website had visuals to help us out
The charts and graphs on the website.
The whole thing about trying to find out.
It was very fun trying to find out about the problem & being a detective.
Using the internet and kind of like be the investigator.
I like when we were trying to figure out what class and what schools did most of the absences take place.

I liked the part when we were able to see where the kids went and how they got sick.
Going to the website to really understand what the lesson was about.
Reading things to try to find out the reason for unusual absences.
I liked how you were able to be a detective and search through the website like a crime scene.
We were not in the classroom, we were on the computer
I most liked the maps. They really helped.
When we went down to the computers. That I learned more about people getting sick.
Using the computers
The bio of the kids
Nothing, I just did not like it.
What I like about this lesson is how we had to refer to the website and make observation.
When we were in groups hand to work together to find out where the students had contact.
When we read the different letters.
Knowing the attendance data and we know how they were sick and what day they were sick on.
The thing I liked most was maybe that we were the investigators and that was pretty cool.
I liked the fact that I was doing an investigation and even though it was fake, something like what we were investigating could really happen.
To find out why the absences were so abundant at one time.
We got to talk to each other about different things.
It was fun trying to find out what causes all these absences.
I liked to look at the graphs and determine how many people were absent.
Talking about it.
I liked playing the role of investigating in unusual absences at a local middle school.
The explanations and materials.
Gathering the info and evidence to find why the kids were not at school
Everything
The sports absents.
How we got the sheets and try to figure the things about it.
I enjoyed searching for symptoms and causes for the absences. In addition, it was really funny when our teacher said diarrhea.
It being easy
I was absent this day
discussions in class.
Thinking about how they got sick. Watching how the schools interacted.
I liked looking at the charts and figuring out what had an effect on the absences.
Looking over the absences charts
I liked trying to find out what caused the sickness of the people.
Answering the questions & gathering evidence from the kids charts.
Looking on the graphs on absences.
That it was hard and fun to figure out what happened.
Fun to look at information
Pretending to be the Health department.
It was very odd (the # of absences), it seemed like a very interesting investigation at the time.

When it ended
I liked how we really followed the scientific method & came up with good scientific ideas.
all the info that was presented & I liked analyzing all of it.
I liked the graph and the investigations.
I got to find out why the kids where absent and I got a lot of materials to help me.
Investigating where they all went to eat, and got sick.
Activities
It was longer and more fun
Everything
I liked the part when we looked at the calendars.
I liked that this lesson tells more of the stuff that you don't get.
The student's parent's interrogations.
It was new to me, and I am always in favor of learning new things.
I liked coming up with an answer to our questions after using the info.
That we had to test our minds
When we used scientific information.
Looking at the graphs, charts, pictures, calendars, interviews, and memos. I felt like a detective.
That we could solve, somewhat, a "mystery".
Group work
It was fun group work
I liked how the information was clear to us.
The symptoms of absent students
I liked was that we had to read the graphs, and say that which schools had more absences.
Putting thoughts together
I like that we had to go through papers of evidence / absences of kids.
I liked the fact that we didn't know why all those students where absent so, I thought it was fun how we got to reveal everything slowly.
When we got the different evidence and got different conclusion.
Getting the chance to do the experiment.
Investigating what was going on
I liked the fact that it talks about a real life situation.
When we got to look at the absents
What I like was that they tell you why the kids get sick.
It was presented in a way that was interesting.
It was great it really made me wonder what happened to all those kids.

It made me think a lot about what I wanted to know. It was a great challenge.
I liked playing scientist, and working like this is a real issue.
What I like about this lesson was I got to find out how many kids were absent and why?
Looking at the graphs, maps and etc.
I liked it because I was able to put evidence together
Good to read
Investigating
I liked to find out why so many kids were absent and I always wanted to know what would happen next.
It was easy
This lesson was highly interesting
Looking at different schools to see how many students were absent.
Getting to actually do something.
I liked all of it because it all connected and made sense.
The thing I liked the most in this lesson was looking at the maps.
I liked the scientific method
That the graphs were easy to read.
going on the website.
Conducting the investigation
The graphs were cool
Trying to figure out what the sickness could be and investigating.
When it was over
Boring
Investigations were really fun
We got to figure out the types of illnesses that could have happened.
It was interesting to find out how people would experiment with a problem like this one.
What I liked most about this lab was that it made you feel like you were the Community Health department scientist.
Looking at the graphs
I liked that all the information was accurate.
It was different and easy to understand.
It was easy to read.
The investigation was fun and easy.
Reading the memos
Analyzing data
I liked asking questions and discovering new ideas.
Reading the graphs

What did you like least about Lesson 3?

Some of the material was messed up on the program and some of it was confusing
It was kind of hard
Writing a lot of things
Confusion was what I liked least
There was no homepage for the website
The letters to the story
No answer
I wished that it was more fun.
The website was kind of confusing
Nothing

The website was stupid
Finding everything was kind of hard.
Collecting the evidence.
Can't say, was not here
It was a little confusing.
Not having links to go to certain pages.
It was not hard to get some info.
They did not show us the number of kids in each school or class.
Nothing
I didn't really understand what I was doing a lot of the time.

What I least liked was getting stumped on the 1st part of the investigation.
That we had to do three and we did not get to finish, we needed more questions to find the illness.
All of the writing.
Having to click the back button so many times.
The evidence
That the evidence pointed in all different directions.
Confusing graphs and maps.
It was hard.
The stage one.
Not being able to find information on time.
It was boring
It was confusing a bit (not much)
It did not give an exact answer on what happened.
It was not what I thought it would be.
That we had to do it
Nothing
It did not give you enough information.
Looking at a attendance data.
I don't know.
The school calenda
Trying to find my way around.
Too easy
Investigating
I had to end so soon
It made me really use my brain but that is not so bad.
It seemed to short.
Nothing
Writing down the information
It was a longer project
Writing information
I did not like getting frustrated.
I don't know.
I do not like how hard it was to do.
There was no actual answer.
How much we had to write things down.
I did not like it when I got stuck.
Waiting to get started.
That we had to go to a certain website.
How little time we got.
All the writing
None
Looking for all the answers.
That cheap chicken hut was a very dirty place.
The writing
There was a lot of writing
I did not like it when we had to do the analysis.
They way it was put together
Nothing
I did not understand the maps
I did not like some of the charts or graphs.
I did not think there was enough information to see what really caused the absences.
It was hard to figure out what the activity map was showing.
Nothing
Leaving the computer lab.
Everything
I liked it all
It was not challenging
Nothing, I liked it all.
Looking everywhere

Finding what caused it
They didn't know for sure what the outbreak was.
Writing down testable questions and evidence. Getting graded.
All the writing
The letters
You never found the answer
It took too long to find things.
Not much
I went a little too slow.
There was not enough information
I didn't like that some of the information given was confusing.
Not knowing how the kids got sick.
After being on the computer for awhile, it got a little boring, but it was still fun.
When we had to search
Writing down testable questions.
Some of the tables were poorly done.
It didn't become clear what made the students ill when you were finished.
I didn't like copying information from the school's attendance charts.
Writing
I didn't like some of the things on the website. Some were hard to read.
You could not easily read graphs
Some of the information was hard to read
It took a long time
It was hard
All the writing
Nothing much
Some of the stuff was hard to understand.
Some places it was hard to figure out what was going on.
How it didn't give me that much info.
Having to look through a lot of stuff and remember what helped and trying to narrow a lot of the info down.
The difficulty of trying to find them out.
Nothing really
The website was kinda hard to understand.
I really disliked how the website was set up.
I don't know the cause.
I was anxious to get the next letter and wanted all of the information at one time, instead of little by little.
It was a little bit confusing, but not really.
Nothing
We never found out what it was.
It was hard
The internet
Nothing
Some materials was hard to find on the web
Not having a full answer.
I don't know
Not much
It was a little confusing for me
Having to answer so many questions
We had to keep comparing data and got confusing at times with all the flipping back & forth.
It was fun to do
I didn't like some of the information because it was kind of confusing.
A boring a little

how confusing the page was
Not getting the answer.
Using the computers
that we had to make up so many different questions.
Not getting the answer
The confusion of the maps. (There were also many needless work sheets)
We didn't get to find out what it really was
It was boring
It was not interesting
It was kind of confusing at time.
It was a little hard.
Some of the info on the computer was a little difficult to understand.
not enough time
Not knowing what really happened to the students.
searching on the internet
I didn't like how it was made.
I couldn't use the computers.
It didn't tell us the exact answer at the end.
didn't find out answer
I liked it all
Some things I wanted to check out weren't there and it felt like you kept going in a circle.
I didn't like how at the end we didn't get the real answer.
It took awhile to find out the answer to some of my questions.
my group
there was nothing I didn't like besides not knowing the true reason and I guess it would have been helpful if there was more info.
I did most of the work they copied off me.
The website didn't have very much info.
The website confused me when we saw the map.
It was a little boring but still good, but hard to understand
very boring
It was hard
It took long
not knowing the final answer
Not knowing the answers.
are computers go too slow and they suck
Didn't like the whole thing
I hated looking for things and figuring things out and finding out explanations.
It was boring
It was a little too boring.
I don't know
Not enough information or details were given.
the computers are slow
It was al little confusing though!
It was hard to intake the data to make more testable questions.
Questions
The information wasn't quite clear
We didn't have as much information
length and all the "new letters"
It was confusing at times
The work sheet
Having to come up with more questions.
It was fun - I liked it
We should have been able to get into more than the attendance report at the school website

Too much info
We only did half of it
It was really boring!
All that we did was look at data and write down our answers.
It was not fun.
trying to find all the information.
There was nothing challenging about it. All the answers were laid out for you.
It was really boring!
The fact that it had so many possibilities
It went by fast
It was somewhat confusing at times, because we couldn't always figure out how to fill out the worksheets.
There was a lot of work to be done and a lot of writing.
It took al long time to do
All the writing
There was a lot of information
Recording things
Hard to find info.
Not always enough info
Nothing really
I didn't like working in a group.
there wasn't more to do with the computer
All the writing
having to do an investigation
It was a little dull
finding all the evidence
All the worksheets and how long it lasted
The site looked like it was hard to navigate and was unrealistic
Again, more time & information so we could prove our conclusion a little more
it took a long time & the website was confusing a little
Answering the questions on the sheets of papers
NO ANSWER
Doing research
how much information you needed just for one question.
We had to write a lot!
The lesson was pretty fair
There was nothing really.
Trying to collect evidence was hard.
We didn't get our last question answered and we had to share the computer.
Nothing
answering questions
The least thing I didn't like about this lesson is when we had to find evidence about the charts.
There was nothing I didn't like about the lesson.
It took a long time to find the answer
Nothing
Not understanding all of the website
I liked the whole lesson.
Not getting to type anything
I didn't understand some of the questions.
There wasn't anything I didn't like.
The thing I liked least was the reading.
Having to read the questions is what I didn't like about this lesson.
We were in groups and had to make the same decision. I did not understand this lesson.
When we were trying to make up testable questions.

Not working with my friends
That we did not get to see the movie.
I liked everything.
I did not like doing the lesson because it confused me.
I didn't like having to read the little charts.
You had to read a lot.
What I dislike was all the things that were not necessary.
We had to solve different questions.
I did not like anything least about this lesson.
When we couldn't figure out a testable question.
Having to read so much.
working in groups
It need more evidence even though it was easy. It showed a little too many graphs and pictures instead of the actual report from a person.
We had to do a lot of worksheets.
I liked least about this subject is the unimportant stuff like
Writing down what we found out.
Putting all the information together.
I didn't like writing down all of the evidence.
Searching for information
We didn't find out how the students got sick.
I did not like writing the information off the computer.
I did not dislike anything about the lesson
We had to write a lot!
The people I was working with.
I didn't like when we didn't find out why they were sick for.
I didn't like how you never found out the answer. I didn't like that the class was too short and soon as you got into it you had to go.
I didn't like how you had to search the website.
I didn't like the percentages on the graphs. It would have been better if it just said how many students each day.
I didn't get the answer. Other than that there were no other bad things.
We didn't have enough time on the website.
The thing I liked less was that the part that says "What is the source"? I didn't like this part because it was a little bit confusing and hard to understand.
What I liked least about this lesson was when I thought my partner was being left out with the website.
I didn't liked the least about having to start up the computer so fast.
That our class was too short and that I could not get the answer.
The class was too short and we never got the answers to the investigation.
Nothing, it was cool. There is nothing I didn't like.
I didn't like writing in the books. It was boring and sort of hard. I also didn't like it because we never solved the investigation.
I didn't like making testable questions. I also didn't like writing a lot.
What I didn't like is if they knew there was something wrong with water why would they let them swim. I didn't like how we didn't know the answer.
What I didn't like about this was that when I first started this lesson was confusing.
I didn't think the website helped me to understand how to conduct scientific investigations very well. I like all of the other things though.
How the sites were set up. I also did not get those big old words. Also, I didn't like how site was set up.

I did not like that we didn't know what the answer was. I also did not like how we had to work in groups.
I didn't like to fill in the papers. I didn't like how it was just the band. I didn't like how it was just two schools and not all of them because they all went.
I didn't like not finding out why they were all sick. Also, I didn't like not knowing who was at the restaurants and who wasn't.
I didn't like having groups because not all of us were able to see the computers.
I don't like not finding out what happened at the end. I didn't like that our whole group only got 1 computer.
What I liked least about this lesson was we didn't solve the investigation. I also disliked that it was easy to get as far as we did. I also disliked that we had to use the lap tops to make this interesting.
What I didn't like was that we had to write papers everyday. Another thing I didn't like was all the work we had to do but it was fun.
I really like this lesson. There was nothing that least interest me. I had fun with using the computer. The computer helped me solve it in a way.
What I didn't like about this was that there was too much information. The mystery was too easy to solve. I know it wasn't supposed to be taken like we were full bore scientists, but it was kind of easy.
That we had to stop. That we had to leave. That we were not doing it anymore.
I didn't like not knowing what happen.
That we had partners. I didn't like that we couldn't solve it. That it ended soon, because it was fun.
What I liked least is that I didn't get alone with my partner but I was able to do it. I also didn't like having to write from going to all of the messages than having to write.
What I liked least about this lesson was that we never really got to find out what they really go sick from because we weren't able to check the water system in that community.
I disliked that we weren't given the actual answers.
I really did not like anything least because it was fun and gave me lots of interests.
I did not like how we were rushed. I also didn't like that we weren't told what the source was.
I didn't like that we ended up with 3 solutions. We couldn't find out were the sickness came from. We didn't like to turn off computers when we were thinking.
What I least liked was that we had to do a small bit at a time. I found myself being very impatient to see if I was right or not. Besides that, I loved the experiment.
I didn't like how we didn't find out what the cause was or what the sickness was. I also didn't like how we had to leave.
What I liked the least was we did not find out what happened or what the sickness was. I also did not like the fact there was not another memo.
I didn't like that we had to stop and go to a different class. We got all excited then we stopped and left.
I didn't like having to stop one I started thinking really good towards the end of class and having to go to special.
I didn't like that in the end you never knew 100% what the cause of the absence was. Whether food poisoning, the bands getting together or water bacteria.
I didn't like that I need to shut down the computer when it was time to go to special.

I didn't like doing some of the work. I didn't like working in groups.
I didn't like the graphs. They kind of bored me a little bit. I'm not good with graphs so it made it a little not fun.
The only thing I disliked was that the lesson was too easy and it was a little boring.
The worst thing was having to leave right before you got your answer.
I didn't like not having the ability to access all of the info in one day. My first question was; What did all of the sick student's have and that question wasn't answered on the 2nd day.
I didn't like the fact that every time when I got into it we had to stop and go to our special and be able to do the rest of it till we came back the next day.
What I didn't like about this lesson was some parts were kind of hard and needed to ask my partner some things.
I think that some of the lesson was boring. Some of the times I thought I was going to fall asleep.
I did not like when we got shut out after the period. When this happened, I got mad because my thought process got cut short in the middle of a thought.
Some days not a lot of information. Some days not easy to understand.
What I liked least was my partner, he was very bossy so I kind of took over, but he was very aggravating.
I didn't like when it ended, I would like to do more of these kinds of activities.
What I didn't like was I didn't get when we had to make questions. I also didn't like how we had to find how they got sick and why?
There wasn't much I didn't like.
The thing I liked least about this lesson is that I would've liked to worked by myself instead of being in teams / groups. Also, a lot of information was given at one time.
We had to shut down fast. I didn't like shutting down the computers.
My partner would not let me use the computer.
I didn't like the part when we had to rush. I also didn't like the part that we didn't get more time.
When we get off the computers is what I didn't like.
Working with a partner
It was a little bit hard. It took a lot of time.
I liked nothing in this lesson but also I did not like the computer when my partner hogged it.
About parent's saying that their kids vomit, choking, dark urine
I was forced to work in a group, but I could do it all by myself. I felt like I was improving and bringing up my grade with this lesson.
I did not like the part when we had to leave. I was happy but when we leave that is not right. I wish you made the classes a little longer.
I didn't like that we had to shut down the computers. I also didn't like when I was coming up with good ideas then we had to shut down.
What I like least was you were forced to leave the assignment and you had to work with a partner.
Everything, I did not like working in groups. I like to work by myself.
I did not get to use the computer because my partner hogged it. I did not like not being here on the first day.
I didn't like that the project ended so quickly because there was a lot of other questions. I wanted to find out and I wished we could have kept going to find out the other answers to the extra questions.
I didn't like the fact that we had to write so much. I'm not really a fan of writing.
I don't like that we didn't get to see what made the kids sick. It could have more to it.
The part I didn't like about this lesson is that my partner hogged the computer. Also, I wish it went on and didn't stop and they didn't told us the answer. I think that we should have chosen our partners.
The activity # 1 was too long and boring. There wasn't really that much that I didn't like about this website. It would have been better if the videos were working.
Some of the maps were confusing. I figured it out but it took a little while. Also, I would have liked to know the answer to why all the kids got sick.
I don't have a bad things about this lesson. I wish that the lesson could go on but that's all.
What I liked least about this assignment was the graphs.
I didn't like how the investigation ended before we could see the cause. I like to work alone. The investigation should have gone on.
We didn't find out what caused the sickness. The maps were a little confusing. It would have been a lot better if there weren't teams.
I didn't like the way they made the graphs for the absentees. They should put a number instead of a decimal, for example; 33.2. Should be a number instead of a decimal. They should have told us what was the cause.
I didn't like not being able to know what actually caused the illness. I would have liked to have the lesson be just a little harder.
I didn't like that they didn't tell us the cause of the absences. I didn't like that we had to end. I didn't like how we had to write so much.
What I didn't like about the lesson was the analyzing data/facts because I didn't really know how to at first. I would have liked to work by myself, but it was still fun with someone.
The maps were confusing for me to understand. I liked almost everything else.
The writing work?
I didn't really dislike anything about this lesson. There was nothing really wrong with it. I didn't like how the thing ended with 3 possibilities.
I don't like that there is not much information and something's were harder than the others and it just wasn't all that fun and I didn't like that we did not find out what was the cause of the sickness.
It ended before I found out what happened with the kids, was it from the chicken hut, lake or the planning meeting.
None, I liked all of it but I would have liked to work alone better.4
The whole thing was interesting.
We had to do this survey.
We don't get to find out the whole story on why the people were sick.
We can't know what the disease was.
I didn't like filling out the paper with the testable question and the other things.
Everything
I liked everything.
It was a little cheesy and sort of boring.
Doing the hard thinking of what it could be.

I didn't like having to write so many questions.
reading the graphs from both middle schools and seeing what students were absent
I didn't like having to write but that's because I don't really like writing so other than that I had fun.
I didn't like the writing part
Collecting the evidence.
Last part
The website was not at all that great.
Next time, have us think more on our own and cause us to infer.
It made me have to think.
boring
The lesson needed more information on the date and students.
The information was kind of confusing.
Having to look up some info
It was too easy
It was still kind of boring
I didn't like the key on the website.
Writing and searching
The tricky responses
I didn't like how we had to analyze the 2 other schools when we weren't even going to use them in the future.
All the deciding on what was the right or wrong answer.
It was a little boring.
It was just a little boring.
The lesson was a little bit boring.
I don't like how it is all just made up and how they try to make it seem real.
Writing the next testable questions
I disliked the investigation, because it was boring.
I disliked how all the students that they had showed on the internet didn't give enough information.
The thing I liked least about this lesson was it took awhile for me to understand what the problem was.
I wish we could have picked our own partners and it was still boring even though we used the computers.
Again, doing the work
I worked too hard
I didn't like the writing.
There was nothing I did not like.
The thing I did not like much is that one person can get on the computer.
Took up 3 class periods
It was confusing and there were many variables.
I did not like how we had to fill out three papers.
writing
The three papers we had to fill out.
That we had to fill a lot of papers
There is nothing I hated about this lesson.
I disliked the fact that we moved so slowly a section a day.
Having to fill out the papers.
We had to work in groups
Having to fill out all of the papers
That each activity was done or different days
The material was hard to read.
It did not explain a lot. I didn't learn much.
Nothing, I had a little trouble getting started though
Having to fill out pages on our findings.
The format the absences graphs were in.
Having to share computers.

The names of the restaurants
Some material was weird.
Collecting the data for # 3
It was boring and confusing and hard.
I didn't like the organization, me and my partner didn't know what to do.
That the problem was already set for us.
It was easy.
The odd & deceiving links.
I don't know
How hard it was to read / understand the charts.
It was confusing at some points online.
long process
The graph on the site was somewhat irrelevant on some information.
The answer to my question was too obvious, and if students didn't know what they were supposed to be looking at / for, the next memo would get them straight.
I'm still not understanding what the purpose of these lessons, so it gets frustrating.
It was kind of boring because it was too easy.
Not knowing exactly what to do.
It was about health
It took a lot of time
The subject of the investigation.
Writing everything down.
All the information was on different screens / boxes.
I think if we were given a question it would be easier.
I didn't enjoy how the site was set up
It wasn't very fun.
It was unorganized.
I didn't like that it was so long.
The website was poorly set up. Navigation wise that is.
It was hard to follow
It had too much info
I disliked the worksheets
I didn't understand the point.
Using the computer was hard.
Coming up with a testable question.
Trying to make a question.
How hard it was
Writing a lot
The graphs were a little bit confusing.
We could not see more of the site.
We didn't get to do it more.
I least liked the subject that the information was based on.
The website was kind of hard to navigate.
I didn't like that they already had the answer. It seemed useless.
I'm not good with computers…
Trying to make a question was a wee bit hard.
Not finding the solution.
We never had the questions answered.
Reading the graph
We had to write.
It didn't really involve my original question
I couldn't understand what we were actually supposed to do.
Did not dislike anything.
I thought it was kind of boring.
We didn't have that many resources.
I didn't like collecting the evidence because it was hard to

figure out what you're looking for.
It was kind of hard.
I didn't quite understand some of the things on the worksheet.
I liked it all, but it was a little challenging.
Finding the site.
At first, I was kind of board, but as it went on it got more interesting.
The true answer was very unclear through all of the evidence.
? I don't know
So many different links to get to where you need to go.
All of the reading
The worksheet
The length
Finding out why there was absences.
Writing (I prefer to type)
I thought it was fun and didn't dislike anything
There was a part that was sort of disappointing. It was Truman and Jackson's School activities calendar. There were just the two schools which hints they connect.
I didn't like how they misled us.
There were a little too many evaluation sheets.
There wasn't tons of stuff for us to look at.
It took a long time to complete. I would rather do the whole thing one day and then move on to something.
It moved too slowly
I thought it was a little confusing of where to go next on the website.
You had to come up with a new testable question each time.
Too much extraneous information was given and I disagreed with my partner.
That we never knew what the cause of the illness was.
I personally did not care for the topic.
That if you were absent you weren't supposed to see the material that you had missed.
I didn't particularly like that some of the "clues" were misleading. Some of them put me on the wrong path, and I got a little confused.
restrictions on website
The interview were just text, not recordings or videos.
I didn't like making the testable questions, because my evidence could've answered most questions.
After the second part we knew what had happened to the kids, it was a little too easy.
I didn't like the misleading information, even though it was realistic to a scientific investigation, it mislead me to wrong conclusions.
The fact that we didn't draw any conclusions.
I liked least is of all the "red herrings" that led us to different directions.
Some of the sources of info were "red herrings", (but then again in real life scientists deal with red herrings….)
It was too short
The "red herring" questions
There were so many possibilities for the solutions.
We will never find out what made them sick.
I liked the whole activity, so I didn't dislike anything.
I liked least how the evidence would give you theories and then drop all evidence of them.
I didn't like how in the end, we never found the real answer. A suggestion would be to in the end, have the real answer and then have students compare their answers to the real one.
That we did not find out how they got sick.
The student activities map wasn't very clear because all of the crossing lines made it hard to read.
Creating testable questions.
when creating 3rd testable question, didn't know what evidence we would get.
Some of the information was confusing.
I didn't like the fact that the website had some things irrelevant to our research.
You never figured out what actually made the kids sick.
This lesson was interesting for the 2nd and 3rd questions, but I really didn't like using the table.
I wish that it would continue to the phase of taking action, because as I said before, these things haunts us a lot.
It was confusing will those memos and handouts.
That we kept reading the same information repeatedly.
I liked everything. It was fun.
I didn't like writing all the questions on the paper.
In this lesson I think that there wasn't thing that I didn't like
That it was a little to long & it kind of got on my nerves a bit because we had to do the thing everyday until it is over.
Some of the numbers were confusing.
Everything
Some of the charts / graphs were hard to understand.
Nothing I didn't like
Trying to solve the case.
It wasn't too interesting.
Everything
Everything
That I and our group didn't like it a lot because one of our partner was absent.
I didn't like wrapping it up.
Everything was great…nothing was wrong
Finding the evidence.
I liked all of it!
It was really confusing
I like the lesson
I really enjoyed the lesson.
At first, it got confusing because there were too many schools & students to keep up with.
I didn't like that it didn't take longer.
I least liked the stuff about testable questions. It was confusing.
Everything so boring.
What I liked least about this lesson is it was boring cause it was so simple and easy.
I liked everything.
There's really nothing that I really didn't like, it was pretty much ok.
I didn't like the worksheets.
The map was confusing.
Saying it
Some parts were confusing.
Notes from Health Department.
Reading all the info
Some of the conflicting information such as the calendar. It had us thinking this is where the disease was transferred.
Mostly everything.
The question were hard to make for us.
The thing in this lesson that I disliked was the vitamin c part.

It was boring
I was absent this day.
writing on worksheets
Lack of info
I did not like trying to make sense of the graphs.
Reading over the explanations.
I liked everything too.
I liked this lesson a lot and I can't say I disliked anything.
after time it got boring, because I'm not interested in biology, but astronomy.
In the beginning, it felt like it was going to be a hard and long investigation.
When it started
Making connections & hypothesis.
I didn't like the how we focused on two schools.
Going through all those facts just to figure out where they went.
Writing
There was a lot of information
I enjoyed everything about this lesson.
What I did like least about this lesson was that it is almost the same as the other ones
I don't know
The fact that it took us at least 3 days to finish.
The thing I least liked in this lesson was sharing new pieces of info, (Calendars, notes from teachers)
It should have been a lot more challenging.
When we had to explain it.
Organizing it hard
All the information we needed to read.
There wasn't enough clues in the beginning.
I disliked how they gave us useless stuff.
The graphs
I liked everything.
I think it would have been better if we got the answer on if the lake or restaurant was to blame.
Writing everything down.
Writing stuff down
It was too hard.

The part when we had to spent a long time looking at the absents and we see it quick.
I think I like everything on this one too.
Some information didn't understand. Handouts a tad confusing.
The graphs they were hard to understand.
I liked it all.
I didn't like some of the handouts like graphs, it was too confusing.
Thinking about the question.
I disliked all the writing
Look at the facts
I liked everything, there was nothing I didn't like.
It was too long
I did not really think about other things.
I didn't like all the evidence because I could've found the answer without most of it.
This less was cool, there was nothing I didn't like.
everything
So many kids were absent from their school.
It was a little boring.
some things I didn't get.
Doing all the writing
It was boring
I liked it all.
It was a little boring.
I would have liked to do it longer. I was fun!
It was long, we went through a lot of pages.
It got boring eventually
Writing a testable question
The maps were a little confusing to understand.
It was boring.
It wasn't interesting.
All the work we did had to do
Having to come up with new questions
Not very hands on
It was kind of boring.
Using the map

Lesson 4:
Pulling It All Together

Lesson 4: Teacher Results

Table 27. Lesson 4: *Pulling It All Together* General Questions

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The lesson contained an appropriate amount of content.	0	11.1	11.1	0	55.6	22.2	4.67	1.32
2. The lesson promoted thinking, inquiry, and study skills.	0	0	11.1	22.2	22.2	44.4	5.0	1.12
3. The lesson was engaging (that is, it got students more interested in the science content).	0	11.1	11.1	11.1	55.6	11.1	4.44	1.24
4. The lesson took an inquiry-oriented approach.	0	11.1	11.1	22.2	33.3	22.2	4.44	1.33

Comments:

This lesson is very necessary to tie everything together. It's really difficult to conduct classroom discussions with students in a computer lab. They are very easily distracted. I think the lesson, however, needs a lot more action to engage the students. How about lot more action to engage the students. How about students doing a role playing with a TV news person interviewing them about their investigation?
This lesson was good too! It allowed for the students to combine all their investigative forms and compile their evidence onto one sheet and then analyze it. They were either really amazed and pleased with their previous efforts in writing down copious amounts of information over the previous 3 activities in Lesson 3 or they wished they had done that (as they had been directed). Either way this lesson promoted remembering details, referring to investigative forms and putting it all together.
Need a stepping stone to connect past (Lesson 1 & 2) studies with present review / reinforcement
Did get them frustrated when they realized the module was over & they wouldn't get anymore evidence to check out.
Some thought this was a repeat of the investigative forms and really didn't connect it with the overall connections to scientific inquiry. Perhaps I didn't stress this as much as I should have.
It was a little redundant to what we discussed in lesson 3.
They had a good laugh because the day after we finished there was a news report about a Salmonella outbreak at a restaurant not far from us!

Table 28. Effectiveness of Lesson 4: *Pulling It All Together* Materials in achieving Learning Outcomes

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. Students should be able to identify a testable question.	0	0	0	22.2	33.3	44.4	5.22	.83
2. Students should be able to describe the evidence needed to answer the question.	0	0	11.1	0	33.3	55.6	5.33	1.0
3. Students should be able to assess whether or not evidence is adequate to answer the question.	0	0	11.1	0	55.6	33.3	5.11	.93
4. Students should be able to evaluate alternative explanations.	0	0	0	11.1	55.6	33.3	5.22	.67

Comments:

The lesson addressed all of the above learning outcomes. It seems like this should almost be another activity of Lesson 3 since it actually wraps up that Lesson. Except for the final question about the Mystery cube & Biological box, it is still related to the Conducting a Scientific Inquiry Lesson Investigation.
This varies widely at this age. There is often a wide gulf between those with concrete skills and those with abstract skills. A fair amount of inferential thinking is often needed for inquiry learning.
I could really see a difference between 6th grade students and 8th grade.
Good summary

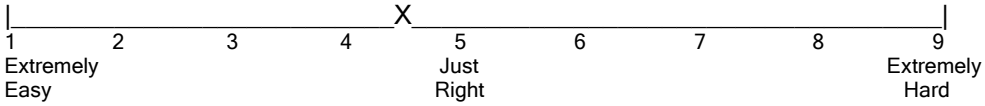
Table 29. Effectiveness of Activities in Lesson 4: *Pulling It All Together*

	Very Ineffective 1	Ineffective 2	Mod. Ineffective 3	Mod. Effective 4	Effective 5	Very Effective 6	Mean	Std. Dev.
1. Overall, **Lesson 4: Pulling It All Together** was	0	0	25.0	0	62.5	12.5	4.63	1.06

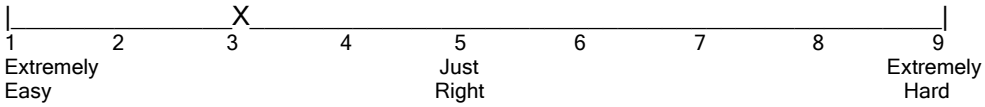
Comments:

The students approached the "Analyzing Evidence" worksheet as though it was the final report to me - the supervisor. They had to "re-cap" all of the evidence they had gathered and the put the 3 investigative report forms and the evidence paper together into a 4 page package. I used this as an assessment for overall performance. I also had them self-asses their work. That took an extra day but was a worthwhile use of class time and it seemed like they didn't want to stop.
Need to pull it together - comprehensive summative assessment (implied here) covers all the major concepts and previous material - THIS missed out.
We were able to discuss aspects that they may have missed on their own. The discussion was more effective than filling out the worksheet.
The kids were a little bored

Lesson 4: *Pulling It All Together* Difficulty for the Student as Rated by Teachers. The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 4 difficulty mean = 4.56, std. dev. = 1.33.



Lesson 4: *Pulling It All Together* Difficulty for the Teachers (i.e. preparation, delivery, etc.). The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the teachers to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.
The lesson 4 difficulty mean = 3.11, std. dev. = 1.54.



Comments:

As previously stated, I believe an activity could be used that was more engaging. I think you need to do some more brainstorming on this one.
This was a little challenging lots of students because, even though they were reminded daily to fill in their investigative forms, they were so engrossed in the website that they neglected to record all of the evidence that they found. By the fourth day when they needed to record all the details, it was difficult to remember everything if they didn't have a reference of it on their forms. That was where working as a collaborative team came in handy. The students were able to share evidence and information and then during the class discussions we were able to get all the key pieces of evidence to make the next plan of action. My students really want to know what the cause of the illness ended up being in the real case - Please tell us!!
This promotes great class discussions.
I think a better lesson to put everything we learned all together would be able to do a different activity that drove similar points home, instead of just summarizing the past lessons. This way, the students would end the unit not being bored with inquiry as I feel like they were at the end of lesson 4.

Table 30. Total Number of Class Periods spent on Lesson 4: Pulling It All Together

	1	2	3	4	5	Mean	Std. Dev.
Class periods spent on Lesson 4	77.8	11.1	11.1	0	0	1.33	.71

Lesson 4: Student Results

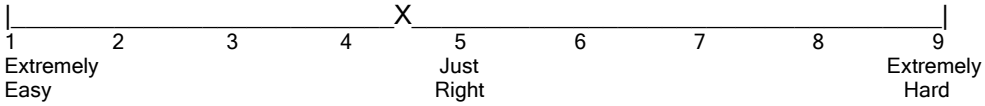
Table 31. General Questions on Lesson 4: *Pulling It All Together*

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The lesson was interesting.	5.1	10.1	12.7	27.2	32.7	12.2	4.09	1.34
2. I could read the material easily	.6	3.0	8.7	17.3	43.5	27.0	4.81	1.06
3. I could understand the examples and explanations.	.7	4.1	7.1	22.9	43.7	21.4	4.69	1.06
4. The lesson made me think about new things and questions.	6.4	8.4	14.2	22.4	34.0	14.6	4.13	1.40
5. I could understand the scientific information easily.	1.4	4.7	7.3	21.3	41.0	24.3	4.69	1.14

Lesson 4: *Pulling It All Together* Difficulty.

The scale used for the difficulty of each lesson was a line across the page with three easily identifiable equidistant points for the students to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard.

The lesson 4 difficulty mean = 4.54 std. dev. = 1.73.



Student Comments on Lesson 4:

It was nice talking about it and sharing our ideas.
Don't get this
I am not really into this lesson because it is about a health problem. Most teenagers aren't really into things about their health.
I didn't like this lesson because it was boring.
I didn't like it because it was confusing.
I thought that this lesson was okay.
I didn't like it because I'm not a big writer, but I did like it because I like mysteries.
The questions were pretty easy. It was very interesting.

The questions were easy. There was lots of information to fill in.
I was able to read the paper. I was surprised about how much I did over those few days.
There was a lot of information and evidence collected.
I think this lesson was very interesting. It also was easy to understand. The information was clear and the lesson made me think about new things.
This lesson was a little bit interesting because I had all the data and was prepared for lesson four. This lesson made me think about new things and questions. I could

understand most of the lesson four but not the whole thing. I also liked working with my friends on this.
I liked these lesson a little because health and science taught us about health in the community.
It was kinda hard but easy and interesting also pulling it all together was cool because we got to go on the computers and it was really easy to understand and easy to comprehend.
I think it was interesting, we only got 2 pieces of homework.
I thought it was interesting of how much information I got. I understand what I was suppose to do.
I thought it was interesting. I could read the paper and I understood it.
I thought this was challenging. I liked the activity it was cool. The forms were easy except if you forgot some of the stuff, the sheet was easy to read. I could understand it.
I think that this lesson is not that interesting. I didn't take good enough notes for this lesson.
I thought the lesson was interesting. It was a little confusing though. The scientific information was a little hard.
Need better notes
I thought the investigation was fun. It had me thinking and asking questions. I think we should have had more clues though.
I hoped I could have got more information. I liked to fill it in because I know what it really is.
Put it all together to try to figure out why there was so many absences in Truman Middle School.
It was a lot more difficult to do if you didn't have good notes. I didn't have enough notes.
It was ok, it wasn't that fun. It was easy.
For the first day, I really wished I had taken better notes. I am glad that I wrote good notes for the rest of the papers & days. I thought it was interesting, I couldn't have done better.
The second day I wasn't here. It was fun.
It wasn't the funnest one but it was ok. It was kind of easy even though there was a lot of writing.
I think that some should have taken better notes. It was interesting. It was fun.
The lesson was interesting. The material were very easy to read.
The question that we had were easy. The first time I took it and the second time I took it. I think it never changed my aspect.
I thought that this was an ok ending to everything. I believe that a better ending could be thought out, however.
I like how we had to test the cheap chicken hot and how the water was evidence of the water.
I didn't like being rushed in 10 minutes. It was difficult because I am a slow writer.
The worksheets was kind of a good way to end up the lesson. Didn't know the answer to mystery was bad. This lesson was easy to understand
I thought that the worksheet was an excellent way to end the lesson. I do admit that I needed to write down more than what I did.
I think that we should have got a chance to solve it. But I think it was a little on the hard side.
The lesson was not very interesting because it was kind of boring. The materials were kind of easy to read. The lesson made me think.
I thought the worksheet was a good way to end it. It

summed up everything on one paper.
This was ok but kinda hard.
The worksheet was good because it put everything together. It made a good end point. But it didn't cause to think of lots of different testable questions.
The last lesson was okay. I'd liked to know what the answer was though.
It was somewhat easy to understand. I didn't like answering the questions.
The lesson was pretty fun. I liked the worksheet. My notes helped me a lot. The examples and explanations were very understandable. The materials were helpful too.
This last part was a little hard and easy. It should have been longer because I didn't finish the mystery. It left me hanging.
I don't think the paper was a good way to end because there wasn't an answer to the problem in Jackson and Truman.
I was absent the 4th day so I was forced to do this on my own. I didn't have any of the info so I had to remember what I wrote down. Had I been there that day, this may have been much easier assignment.
I didn't really like this part, It was kind of boring.
We didn't get to see the results. I didn't really like that. Overall, the lesson was pretty easy.
It was an easy paper with the investigation sheets. We already did helped to do the paper.
This investigation wrapping up the information was a real run for the money. It made us try to figure out the problem and put it on a wrap up sheet.
I should have put more information down. I should have not touched.
I really liked writing and on some of my investigation worksheets, I wish I filled in more bit it was still easy!
We left the answer why they were sick with 3 possibilities. I wish we had more time to finish the paper because I had lots of notes.
I thought I didn't have enough information because we didn't have the computer but we got to ask our team for the answers.
I should have filled my paper more. It wasn't that hard because I did take some good notes.
I liked how the information was stated clearly and it made it possible to have good notes to fill in the paper. This lesson was interesting because we usually don't look at this sort of scientific studies.
I didn't like it much. We never solve the investigation.
It was easy.
I could think of better questions because my partner helped me to make some questions up. Filled in the investigation worksheet.
Fill in investigation forms better. Fun to do the experiment, why did we have to stop so early?
If we could do the activity without a partner because my partner did not really do anything and I wish that I should have put more info on the paper and I wish that because I could do it by myself.
It helped being on a team. My notes helped me.
I wished I had enough information for my investigation worksheet. Also, I could hardly understand the examples and explanation.
Well, the last step was shut down the lab tops.
I also found this part of the investigation fun and interesting. We got to look and write down what we

learned I found out.
I loved the whole thing and I had lots of fun. I wished I could find the answers with a group and do fun and had lots of fun and the best it is not boring.
This is the only part when I liked being with a team because I forgot to write down a piece of evidence they would know it.
I should have filled my papers in.
I wished I had more notes to work with but I was glad to have my group to help me. I didn't have enough time to finish my paper and I think if I had more time, I would have been able to hand in better work.
This lesson wasn't interesting to me at all and it didn't really make me think about new things.
The lesson was good. I'm glad that we had partners which made it easier to do. There were a lot of good information.
This lesson was a little boring. My notes were not bad but I wish I had more. I was glad we worked in teams. I say that the worksheet was too long and too much. I didn't get to finish by the time it was collecting.
My notes could have been better so I could do the worksheet and I felt good being on a team so I could use the other persons notes. It wasn't that hard of a sheet but it looked like it.
The lesson was boring, but it was easy. Some of the questions were difficult to understand. They weren't worded that good.
I want to use computer more. I was glad that I had good notes. I wish we could use the computer to type up the sheet.
This lesson was pretty fun, but I think it would have been better if we did it as a class.
When I was putting it all together, I had a lot of information. I added more notes to the evidence that I didn't have. I filled up all the spaces on the worksheet. I was surprised that I finished in short time period.
I was surprised by the helpful notes I took. I thought it would take a lot longer than it did. Some questions were confusing.
The lesson was not interesting. I could read it all and understand it.
I really don't remember this lesson much, because I didn't really like it too much.
My notes were really good so it was easier to fill it in. I was able to finish in time before class ended. My partners around me helped me if I didn't know a question.
I really could understand and it was fun. I liked that we had a lot of information.

I was glad to be working in a group with another student to help me.
I was very surprised that I have all that information on my paper. I was also surprise that I understood the things we did.
I was surprised of how much I wrote! I wrote a lot. I didn't think I took that many notes, but I guess I took enough.
I think I did good because I wrote a lot and I was glad I had a partner because he could have more information than me and I could add it to my notes. I liked it cause I had all the answers and my notes were good.
My notes were okay and they had good information. I finished Lesson 4 with a lot of writing. I was not present on the first day but I used my partners notes.
I kinda liked the lesson
Too easy
The lesson really made me think and it was also interesting.
The sheet was almost just converting your findings into sentences with a little extra.
It wasn't really a fun activity, but it wasn't BAD either. I think it was necessary.
Try to add more information
I didn't find it very helpful or interesting. # 3 it took me a little while to figure out what the questions meant. Maybe word.
I did not find it interesting
I didn't really understand the lesson at all and it was hard to tell what question related to which part of the website.
Weren't any examples / experiments.
It felt like a real accomplishment when I came to my final conclusion.
The lesson wasn't interesting because it didn't have any uniqueness in it, like all the others did, and you really didn't have to think hard about the questions. Since you can just pick out old materials and get the answers from there.
(Same as past three)
Put a section between agree and strongly agree
We didn't do anything very interesting in this lesson, but it was a good wrap up of the previous lessons.
Please try to give more evidence.
Make OJ guilty
Some of this was just not comprehendible.
I didn't get it that much.

What did you like most about Lesson 4?

We got to figure out how the different items helped us solve the mystery
Nothing
Figuring out what's wrong
Writing low the evidence was helping my partner and I
The idea was good for summarizing
To find out what was going on in different schools
Figuring out the questions
That it was easy.
I liked being able to decide if it was useful.
Talking about how the kids got the illness

That it was easy.
Going back and see what I did
Knowing that our school was not going to get the flu.
Talking with the class.
Retaking the quiz
It was fun.
It made me see what scientist go through.
It was alright
We got to use interviews and charts, maps to help us.
How you had to think
It made you go back and collect all the data.

What I like most was filling in the questions.
That it was short.
I liked most was that we kind figured out what the epidemic was.
Thinking of the ways the information helped my group.
Computer
That we had to think
Easy to understand
No homework!
Answering the questions.
Finding out what happened
It made you think about it and reality.
That the questions focused mainly on the topic.
It was cool.
That it was with a partner
Nothing
You reviewed what you did before.
Nothing
I liked summarizing everything.
I understood the test easier
Figuring it out.
Kind of fun
I got to work with my friends
It was easy
That I got to say what I learned.
It was easy
It was not all that hard
They mystery cube
Nothing really
I don't know
I like how my grades went up.
Thinking about why they were helpful.
It was easy, all you had to do is answer questions about the website program
I liked remembering what we did.
I liked learning what happened at the end.
That we had to do maps and stuff.
None
It made sense
None
Nothing, it was not fun
There were a lot of testable questions.
Nothing much
I liked it when we did lesson no. 3
It was easy
I had a partner
I liked getting all the mixed information down on one paper.
I liked that we got to sum all of the lessons up
Finding out what may have caused the absences.
We got to summarize what we had been doing.
Nothing
Reviewing what we did.
I liked talking about the website
It was fun.
We didn't turn it in.
Asking new testable questions.
Doing the questions
No homework
It was just putting it al together.
No homework
Looking over what we did
The questions

How all the experiments were about one thing.
Coming up with different answers.
Try to figure out the mystery
I knew what to do
Everything
You got to write down what you figured out
I liked that it was reviewing everything we learned
Working with my partner as seeing what was helpful.
Seeing how much I know
I liked this lesson the best because it was just more fun. I don't know why, it just was.
The after tests
Everything
It was fairly easy and was fun.
How I got to figure it out
All of it
You got to share your opinions with your classmates.
Writing what things were for.
Having partners
I liked working together with my partner.
You got to finally draw a conclusion
We got to put it all together and talk about it
Everything
It was fun.
How easy it was
It was kind of fun
I liked that It made you think.
It was fun.
Not much at all.
Being able to go back and put your info and someone else's together.
When we learned about our community.
That we got to use partners to help you think about things more.
It was pretty easy.
Being able to talk with my friend.
We had more info.
Working/sharing ideas as a class.
Saying what we believed made the children sick.
It was fun.
We figured how to answer our problem.
Getting to blame people
I liked that we got to look back on all our work and make a conclusion.
Learning about another Health Department.
Completing the work
Interesting
Most everything
Of all the things that helped you out during the research
It wasn't too hard
Just comparing what could have happened.
It was very challenging
I liked the explaining what I liked.
Interesting
it was easy
fun, just like the others
I liked because it was quite interesting
Say what info helped us
Everything
That we got to pull all our ideas together and say what we thought and if the website helped.
It was interesting

How you had to ask questions
That the lesson was interesting and it got me to think harder.
Trying to put everything together and relating the 1st lesson with the fourth lesson.
I liked all the things we had to do on this lesson.
It gave more info.
It was kinda fun to do with a group.
It let me think about the whole project.
That we got to come with questions to ask
came up with new questions every time we answered one
It helped us put all the evidence into a conclusion of what we thought!
I liked how we worked together
We had to think using the info.
It was cool comparing my assumptions w/the other scientists.
We all told our ideas.
That you had to kind of make up the conclusion because they don't tell you what really happened
it was fun & interesting
It was easy
We got to work on interesting & fun things
Working w/other people for ideas
Didn't involve too much effort
I'm not sure
It wasn't too hard
Interesting
I liked that it's finally over
It refreshed my memory on what we had done during the period of time.
I don't know
Getting & explaining the answers.
It was really fun
I don't know
It was somewhat fun.
My conclusion (group conclusion) was actually fitting with everyone's conclusions.
All the facts
It was very enjoyable to try to figure out the cause
It was a challenge.
Don't pay attention to this (he is referring to column L4 Diff) because almost everything's easy for me. Writing the conclusion
The website
Not much
It made us realize what we need and didn't need
It was not too hard not too easy
It was easy
It was fast to finish.
writing down the things I got from each source
It put all the data you gathered in an organize fashion.
A lot of group work
Doing the work sheet
The discussion helps me understand it.
Settling on a practical explanation.
That we got to say how the materials we used helped us.
This got us really thinking & putting the data pieces together.
It made me think
I don't know
The conclusions were cool.

wasn't hard at all
not sure
I really disliked this part
I had to think and use my mind to put together the answer.
It wasn't that hard.
It wasn't boring
you have to gather your stuff and see what you got.
Coming up with Theories of absences
It made me think
It made me think there could be more possibilities as an answer
I could read the material easily
It was easy to read the materials
It was ok, but I really didn't like this activity.
Wasn't very hard
I liked it when we had to find out what made them sick.
I had to explore
it was over
We got done with all of it
Answering the questions is fun.
I really didn't like anything
I liked it because it was short.
The questions was helpful and it tied in the other lessons.
It was easy
Nothing, I liked the lesson
I like when we answer all the question about everything.
I liked answering the questions
Working on the computer
Evidence
I didn't really like it, it was boring it was more fun on the web and asking questions about the lesson better.
I liked nothing about this lesson.
I liked getting to compare stuff.
The teacher explained some of the examples.
That we got to talk with other people in the room.
I worked in a group.
Asking questions about the lesson was what I liked most.
I could organize all of my facts and evidence.
I liked making up questions with the class.
I liked the lesson that you can use the website for information.
It was okay.
I liked that I was able to work with my partners.
I didn't like this lesson at all cause it was boring.
I didn't like this lesson.
What I like about it was that it was easy to do it made you think of all the lessons and pull it all together.
There wasn't anything I like most about it.
cause it was fun
That we got a chance to know about the things we didn't know.
I liked trying to conclude my experiment.
I had all my explanations and answers so it was really easy for me.
I got to work in a group.
I like most about this lesson is that we are not going to the computer lab anymore.
It helped me think about new things.
The information was easy.
I liked knowing the answers.
Looking at a chart.
I liked this lesson because it was Friday.

I did not really like this lesson.
When I could understand some of the information.
I liked that I could write all my evidence on one paper. I also liked that you could work with each other.
I liked how we had to take notes and put it all together. I like how handy the handouts were.
I like that it was easy to understand. It was not hard to fill in.
The answers to all the questions were easy to find because of my notes. I liked working with my group because it made it easier to answer the questions.
There was not a lot of homework.
The thing I like most about this lesson is that we analyzed the evidence and put it all together. Also, I liked that we worked as a team.
The most I liked about this lesson was when we were like real scientists we had all of the data and then we had to find out what the data goes into.
That we learned about the health department and how health is in the community.
I liked that we had to put all the information together to figure out what happened. It was also fun because we never got our answer which makes me keep on thinking. I also liked how easy it was and really understandable the lesson pulling it all together.
I liked collecting data. I will tell you this, it is not boring.
I liked getting the information. I liked seeing where everyone went.
I liked writing down the information. I also liked getting the information and how the students got sick.
I liked it because it wasn't something you could write anything down. It makes you have to think more and harder.
I didn't really like doing this lesson. This lesson was confusing for me.
I liked answering the questions. This lesson was very interesting. There wasn't a lot of problems either.
Liked the computers, liked the site it was different than the first one. I also liked the pictures on the site.
I liked how fun it was. It was interesting how much evidence we could gather. I liked how we got to make the choices of how the children got sick.
I liked it because you see how everything works. I liked to answer everything because if I didn't know it then it would be really hard to do.
I liked writing all the information down and trying to figure out why there was so many absences.
I liked having groups for this one because I didn't have much notes so I could ask my group.
I liked the challenge because the questions were hard. I liked
I liked that the questions weren't too hard. I also liked that the teacher gave most of the answers.
What I liked was all the evidence was easy evidence. All we had to do was put all the evidence on the paper and it was pretty short.
I liked everything about this lesson. I usually hate writing but I am proud of myself that I wrote a lot and didn't hate it. It was great working with a group.
It was fun. It wasn't too hard.
I liked you could ask other people by working in groups.
That we didn't have much homework. It got us to think harder. We really had to think.
The most that I liked was when we were able to get a letter and a message. Plus, when we got the information.
What I liked most about this lesson was that the questions were easy.
I liked that this lesson was an overall ok ending. It wasn't awful, yet it wasn't anything spectacular either!
I liked when we had to test the cheap chicken hot and test water.
I liked bringing everything in one paper. It was good to bring it into a final copy.
I liked that we got a lot of information to investigate. We worked as a team and found that there was 3 places were the sickness could have come from.
What I liked most was the ending. The end worksheet was great to end the session. I think that it should be done again with the same worksheet.
I liked how we got to look back and see how much we improve. I also liked how we got to use the computer.
I liked most about this lesson was being able to tell you what I found out. I also liked to compile all the info.
I liked that the worksheet put all three pages of evidence into one paper.
I didn't get to find out what ended up happening, but that made more fun because I wanted to think of a reasonable cause.
What I liked most about this lesson was it put all the thoughts into an idea of general information. It was easy to fill in the questions.
I like that it asked me questions about things from the beginning.
The material was easy to read. I could understand the questions.
I liked doing the worksheet and coming up with questions and finding the answers.
I liked the whole lesson. It was not that interesting.
The thing I liked most was trying to figure out what happened to the kids. If we found out what happened, it would be better.
I liked the simplicity of the worksheet for this section. I understand it very well and it helped me to catch up.
The part I liked most about this was how we had easily finished up the investigation.
I liked when we had to write everything we knew about the incident…I thought this part was a little bit fun….
I liked how we already had the information to answer the questions so it was easier. It was a very easy paper.
It made us take useful notes and use resources we had. It had a good impact that we could do a seven question paper in ten minutes and have lots of information for each question.
The questions were not that hard. I know most of the questions.
I liked writing because I love to write so it was fun. Also, it was easy! I wish we didn't end like this though so I wish we knew what really happened.
I liked how I showed myself how hard I tried on this activity. I liked it because it shows you actually how much information you gathered at the end. It was so real even though the web page was fake.
What I liked the most was when I knew the answers to the questions and didn't have to ask.
What I liked is that we pretty much solved the mystery. I also liked that the effort that took about building this website.
I liked the most that it was really easy to fill out the sheet.

Also, I liked that the notes I took from the information on the realistic website helped me to fill out the paper completely and properly.
I liked using the computers, I also liked having a partner and I liked it because it was real.
I liked how we started to work. I also liked filling in the worksheet.
I liked how when we started to work. It lasted a long time. I wanted to find out what happened.
Finding the evidence for the lesson so we could figure it out. I like using the computer and how it was like a real website.
I liked the way our group out the answers together. It was fun think about new things that could help solve the lesson.
I liked it when you could look at our investigation sheet for some of the answers not all. But it was kind of confusing.
I loved doing the finding of Jackson Middle School Band absents
I liked being able to remember what I had done. I could understand it and it was kinda easy but also a challenge. I also liked the fact that the website got so real.
I liked the part with a partner and it was a lot easier than I thought it would. Was so fun also. The easy part was not the end.
What I liked most about this lesson was all you had to do was just copy off at the other worksheet.
I did not like anything of this lesson.
It would have been better if I were here on the first day, The 2, 3 and 4th day taught me a lot.
I liked that I had my group to help me because my notes weren't really good. If I hadn't gotten to work with other kids, I wouldn't have been able to fill in much of the paper.
I liked this lesson because we worked as a team so the grade didn't ride on one person.
The thing that I liked was that it showed how much that I knew and I thought that I didn't know that much and I learned a lot from it.
I liked that we worked in groups so we can use other peoples notes and I liked that it relieved what me and my team done.
The most I liked about this level was being in a group because it helped when it came to answering the questions.
I liked how you could use the other person in your team notes in case you didn't have enough. I also liked to see how much evidence I had taken paid off.
I liked the computer and all the group work.
What I liked most about this lesson was that I got to answer questions and feel important.
I liked having a discussion so I could get more information. I liked having a lot of evidence to fill out the final paper.
I got to use my notes. I got to look at my partner's notes in case I didn't have something.
I liked the part where we were able to work in a group. I also liked were we were able to work on computers.
The thing I liked most about this is that we worked with a partner so I could use his notes because I didn't get a lot of notes. I was surprised from how much of the information was going through my head when I did the questions.
I like that we took notes so the questions were easier to answer. I liked that it showed that I took really good notes. I liked that the questions they asked were all in my notes.
What I liked most that the worksheet was good, not too easy, not too hard and I understood it.

My favorite part was trying to remember the evidence and figuring out what made the kids sick.
I liked most of it?
I liked looking through my notes and seeing what I had written. I liked working on computers.
I liked it because I had a partner and I also liked it because it wasn't too hard. I think it was almost just right for me and I like to write and this activity had a lot of writing and information and I think the questions were easy because I had really good notes.
I like that we did extremely good and that we worked as partners and that we used our notes to answer the questions.
All of it
What I liked most about the lesson was doing the cubes and a question worksheet.
We didn't have to write our answer down; it was written there.
I liked when I got to write how each step (of the computer activity) and how it helped me because it was kind of opinionated.
We got to review the health investigation.
I liked answering the survey that we did at the beginning over again to see if I became smarter.
The entire thing!!!
I liked working on the questions. It was pretty cool.
This lesson sort of tied up all the odd ends and questions I had about the community health department investigation. Though I didn't get a full answer from the previous investigation, I do understand better how information relates to testable questions.
Reviewing what we did in the investigation.
I liked thinking about it (the other lesson) all at the same time.
testing the testable questions
I liked how we got to go over what happened in the beginning of the lesson.
The thing I liked was when we took the true / false questions.
That it was not too hard
computer time
The lesson wrapped everything up.
Taking all of our conclusions and sharing them with the class.
learning new things
Coming to a conclusion on what the sickness was.
We worked with people
Nothing really
Trying to find out the info.
Well, the computer part was the really only fun part about it and it wasn't that much fun.
It was easy.
I liked going and investigating things
It stretched my imagination
The feeling that you were an investigating doctor.
I liked thinking about the questions
It was strange.
It connected all the evidence.
No work! Just listening to the teacher talk
we had to do no writing
The facts we should have written
I liked how we had to give away our own information for the paper.

I liked that during this lesson we could try to analyze all of our data into answering seven questions.
We went over the answers.
Doing the projects
I liked finding out the answer to the question
I liked most about this lesson is that I liked how people had problems about getting sick.
The lesson made me figure out how useful the information we gathered from the website.
I like the most is that we have to look for the things that were the school and things like that.
It broke it down into many questions not a big paragraph
It kept me thinking about the background on the virus.
I didn't like anything!
well, that we learned a lot about scientific inquiry
The part were we had to try to figure out the thing
I liked how we went over everything
Not knowing what was under the cubes
We got to work with cubes
The website
I liked that it was different from what we usually do.
That it was easy.
Figuring it out.
Working in groups.
Working with a partner to collect information
Getting to use the computers.
Cheap chicken hut
Getting on the internet and try to find info.
The fact that we had to investigate things. We had to search for the answers they weren't bolded so we could only read them.
Working with computers.
I liked looking at the charts and examples on the internet. It was much easier for me to understand with pictures and examples.
It helped us finish our scientific investigation successfully.
I think it helped me think of hypothesis.
The internet site was okay.
The relation
Finding the clues.
Knowing a lot of info from recent lessons.
It involved logical reasoning & we got to work with a partner.
I wasn't required to spend pain staking hours over it.
That it was more hands on. It made it more interesting to do.
It made us think more and draw conclusions.
Being able to investigate what happened on the computer.
It was on the computer
We got to work on computers.
That we were on a computer.
Using what we knew to find out what made the kids sick.
It made me think more and pull all of my resources together to get my final answer.
I liked it being on the computer.
I liked how I learned how to study testable questions
We got to have a group discussion.
It was easy.
It was easy and I didn't get confused on it.
I didn't really like much…I was gone for half of it but the website investigation was ok I guess.
I liked having to figure out the answers to our questions using the evidence given.

The scenario made it interesting.
It was the end
I like the ability to make graphs and see the stats the best.
The fact that we could use the data to figure out the answer.
Figuring out what was important
The water problem
We were able to go back and review our data.
I liked thinking of answers to my testable question.
Getting data
Looking at the data to answer the questions.
I like to be able to speak my thoughts about things.
It was an interesting lesson, I liked that we got to problem solve, it made sense and was easy to understand.
We got to use computers
I liked how helpful the information was.
I liked how it explained the connection of the investigation with scientific inquiry.
Not much, It wasn't very interesting.
I liked how I had to come up with an explanation myself and I could say what I thought.
We gained understanding
Working to figure out the questions of the worksheet.
It made me think about my community.
It will help whoever's going over this.
Looking on the web
We used computers.
It helped follow up the previous lesson.
It was way better than doing book work!
The whole lesson in general!
We could look back on previous things.
It worked your mind
I just did everything on one simple sheet.
Finally, getting to use the info.
I didn't really like anything.
It was easy and very fun.
I liked everything
We could respond on what we thought of everything.
Not really anything
There wasn't anything specific that I liked about this lesson.
It was easy and simple.
I didn't
Collecting the information
The web
Time in the library
The health related thinking.
Exploring the web
I don't have a favorite
I didn't find much fun in it. It was sort of hard to understand.
It was interesting & thoughtful.
I liked that it was a discussion. I have a tendency to talk a lot, so I thought this was fun.
It was nice to be able to give my opinion on the cube experiment.
Good follow up to previous lesson
I liked relating to examples to real life and facts.
Putting our information into organized places of where we got it from.
That we were able to write our own ideas about the information given.
It sums up all of this quite nicely.

It was hard but fun to recap all the work you had done on the investigation.
I liked that some people had different ideas than others, and I liked hearing all of the ideas, and processes of different people.
The map of where everyone went.
I liked discussing our possible reasons why the children were missing school.
I liked learning about other people's thoughts on the activity.
I liked how we had to use all of our evidence to draw conclusions to the problem in the community.
That everybody in the class had different conclusions.
I like most is how the questions are already provided for us and we did not have to come up with the questions.
Listening to others explanations
It provided a concluded the curriculum.
the interesting conclusions people came up with
I liked how we shared our different theories and clues to the investigation.
It was really easy (too easy) and we got to say how the things on the website helped.
I liked taking all of the information and putting into context.
I liked most discussing the activity with the class.
I liked how we discussed how the evidence related to our testable questions.
We got to find out how other people used the sources.
Il liked the discussions.
I liked the fact that we could write our opinions on the data.
The website
Reflecting on the investigation simplicity.
We got to talk about overall thoughts and hear other people's ideas, which was interesting.
It wrapped up al of the lessons well.
I liked how we all got to express our ideas, helping us come to our own conclusion.
I didn't like anything!
This lesson was good because it helped pull together the lessons we had learned and I could look back at it.
This lesson kind of explained the whole shazam.
I liked putting all the info we had together.
I liked how everything came together because of the evidence we gathered and the questions we came up with.
That we got to solve the problem and we got to put all the information together & come to a grand conclusion.
There wasn't anything I liked a lot
I learned everything about investigation and this helped me review all the stuff we did.
Glad that this was the end of the investigation of absences.
What I like about this lesson was how to investigate.
Group work
That we got to investigate from evidence to help find an answer for question.
I liked that it was an overall of all 3 lessons.
Didn't have anything I liked
Using maps and evidence to find answers.
It makes you think.
It was fun
Nothing
Everything
The experiments
I didn't like anything about this lesson.
Got to know what the result was

I like "pulling it all together" cause it helped me understand everything more.
Everything
All our group talk
I liked how our investigation and evidence led to a simple conclusion.
I liked putting all together because I got to see what was wrong the kids.
How we found out what might have caused all of these people to get sick.
The fact that tables and maps made us think about what could be the problem and what the solution could be.
There wasn't anything to like
That we finally were trying to find out what was wrong.
This lesson was the best of all because we gathered all the info and found the answer.
Well, working together was kind of interesting and being able to share our thoughts.
I liked when we gathered all the information and evidence we found.
The thing I liked about the lesson is when we were able to answer all the questions.
Reviewing everything that we put together after we were done with the other lessons.
Writing
I liked that it was like a puzzle and you had to put all the pieces together to be able to solve it.
We found the answer
I enjoyed finding out it was the contamination of the water.
When we answered the questions and tried to figure out what the other questions were about.
The maps and graphs
Nothing, don't like it
I like how we put all the information and found the problem.
The thing I liked most was how we used all our previous information to answer questions.
Writing down the evidence we got and just wrapping everything up.
How we talked about every clue that we had got and what did it all mean.
I liked this lesson because I really learned a lot.
To talk about what we did in the previous lesson.
We got to share ideas.
I liked how it made us think more about the evidence, therefore, we could draw conclusions for lesson 3.
I liked everything of doing all in Lesson 4.
It was cool about the subject.
I liked everything about this lesson.
Explanations
Seeing what happened to the children
I liked the fact that we came to a conclusion.
Mostly everything.
How we saw the map and it helped us.
I don't know if this is awkward but I enjoy writing…anything, I guess. I really liked the researching of the 2 schools.
It was easy.
It was easy
discussions in class
Looking at graphs and models.
I didn't like anything the most.
Looking over health charts.
I liked to read about what happened in the article.
When we found out why & how & when the kids were

absent.
I loved doing the questions on the worksheet I think it's called analyzing evidence.
It was fun because you had to think a lot.
I liked to answer questions
the graphs and pictures
I liked this lesson because it was fun to do.
Because it felt so hard in the beginning, when we got to the end of the investigation, it didn't like it was so hard anymore because, though the investigation all I had to do is just think and search a little bit more each time we had a new question.
When I got to dissect an animal
I liked how we put all of our information together and kind of turned it into explanation.
looking back on everything I had observed & studied.
I liked the music and the sick chart.
Summarizing everything so I can remember everything.
"Putting it all together"
Activities
Everything
I liked the time we all were making sense to our hypothesis.
What I did like most is that it is same as one of the lessons that I did before this one.
I liked it because it was like putting a puzzle of life together.
I liked how they took our opinions in this lesson.
That it was easy and flowing.
When we put it all together
Group work
It was a good conclusion
It was fun and interesting.
I liked was that when we looked at the health department.
I knowing knowledge
We went through all that we knew together to find an answer
I thought it was fun how we got an idea on how to answer the question.
How we got different conclusions and had to work in groups.
Finding out what happened
Looking back at what we just learned.
I didn't like this lesson at all.
Because I got to know why they were sick.
What I like about this lesson was that it tell you why they get sick.
Nothing really
I liked the letters
I liked finding a conclusion which may have answered our investigation.
What I liked about this lesson was really easy and fun.
I liked feeling like a real investigator putting all data together
Good to read
I found this lesson boring because I didn't really want to know what would happen.
I knew what it was about and I liked that I wasn't confused.
I liked how it really got my mind going.
To find out how the students got sick.
I liked the questions and the process of finding answers.
This lesson was good because we were sharing our thoughts.
Everything
I liked learning why how many students became absent in a short amount of time.
You had to observed evidence
The pictures were really easy to read
Trying to think about the community health department
Putting it all together
I didn't
I don't know
Boring
How all the little twists came together to form one big solution.
It was interesting
Finding out the answer to the problem.
Finding out the conclusion
I liked that it was interesting.
That you could've had multiple questions.
It was easy to understand
When we got all the evidence and got one conclusion.
It was okay. I liked it when we had to look at the graphs and maps.
Finding a conclusion
I liked learning about this stuff. I also liked having to figure out what and why it happened.
Everything
Figuring out why everyone was sick.

What did you like least about Lesson 4?

Some of the questions were confusing
The questions were confusing
Nothing
Doing it for no grade
The questions were confusing
Reading it
It was the same questions from the computer
I did not like doing something I had already done
I do not know
That it was too easy.
That the questions were all the same and you could not tell which went with which part of the data.
Having to think of more and more questions.
Doing this
Nothing
Not knowing the answers to the questions.
Just didn't like the questions they gave me, couldn't get the right answer.
Nothing
How you never know what the outbreaks was.
It was hard to understand.
What I did not liked was not understanding it sometimes.
That we had to use a partner.
It was boring.
How the information helped my group.
Packet
It was easy
Nothing

It was hard!
Reading long paragraphs.
None
It was slightly boring
It was kind hard.
That it was just a review of what we have already done.
I did not like the problem, there should be a different one.
That I had to do it.
Writing, how it helped.
It was boring.
Nothing
It was a little boring.
Nothing really
That they did not tell us what the answer was.
Too Easy
The work
It was a bit boring
Nothing
Writing all the information down.
Made me think about the lesson from the day before.
Writing information down
Nothing really
I do not know
I do not like how hard it was to do.
Telling about it if it was not helpful.
Nothing
I did not like writing a lot.
The ending where they kinda told you the answer.
I did not like that we had to put it together.
None
It took too much time
None
Nothing
It was confusing
The questions were funny.
It was just rewriting the "evidence" that we had already recorded
I did not like it when we did lesson no. 2
It was in the computer lab
It was not necessary to do the lesson
I did not like some of the questions.
I did not like re-taking the tests.
That you never found out the exact reason for the absences.
Nothing
Nothing
Doing the tests at the end.
Everything
I liked it all
It was plain.
Writing the evidence and seeing how it helped.
Using this graph
Having to think about it
Think of where they ate and seeing what caused it.
I liked it all, it was easy.
Writing down why stuff helped us solve the problem
All the writing
It was boring.
Not being able to find out the answers to the problem.
The back button
I don't know
It did not have any information

I did not like the fact that it was very easy.
Nothing, it was easy and kind of fun.
Needs some more activity
I liked the whole thing.
Everything
Doing this packet
Writing about whether or not it helped you.
I don't know
It was a little boring, since we had already learned the stuff and it was review.
Writing why or how it did or didn't help.
Questions
I didn't like explaining why things were difficult and why other things weren't.
It didn't go longer
Nothing, it was easy
It was hard
Too much writing
Nothing much
It was kind of boring.
Nothing
Everything
Having to practically rewrite everything I already wrote.
The difficulty.
Nothing really
Need more specific on the question.
Having to write a lot.
Lack of evidence.
Only using one day.
That we weren't completely confident that our answer was 100% correct.
Not really being able to know why all of the students were sick.
We did not find out a lot of info in the letter.
All
The writing
Nothing
Nothing
I don't know
Not much
It was at times confusing
It was too easy
We just sat and talked.
It was fun to do
I didn't like the data table it was kind of confusing at first.
Kind of boring
having disagreements with my team
Not getting the answers
that it was too long of a project
Nothing
The directions were a little unclear
Everything
Everything
It was too easy now that I got the hang of things
There is no answer
Everything was ok
Just hard
There be more questions that require us to make more details.
It was all too confusing.
The questions were kind of confusing.
No answer

I was so confused since we never really know what caused the illness.
I didn't like that we didn't have the real answer.
It got kinda confusing at sometimes
Having a bad group
My group did not work, I just did.
They should have told us what happened.
it was hard and boring
It was boring.
it was a little hard.
That I had to do it.
Don't know
a lot of it
I didn't like thinking of a conclusion because I didn't have enough data to write a conclusion.
It was jut too boring because something's like filling out all those sheets are boring.
I don't know
A lot of questions to be answered fully.
It was a little boring
maybe a different topic!
Not much at all, in fact, I don't know what I liked lest about.
The information was pretty hard to understand
Wasn't as interesting
? I don't know
The work sheet
everything
It was hard.
The way it was set up
I got a little confuse
I had to write
It also was boring.
Everything
Everything
coming up with things I got from each source.
It was a bunch of writing, for answering pretty much the same question over and over again.
It was boring.
Analyzing info is hard for me
It was a waste of time
It was longer than some of the others.
It was long & not an interesting topic.
It got confusing
I don't know
Nothing
Too much writing
not sure
Too much writing
Doing a conclusion
it was a little hard.
it was hard
Worksheets
the answers were not specific enough and more data is needed
Nothing
It was boring.
I didn't like this whole activity.
Nothing
We still didn't have a definite answer & we never would find the real cause of the absences.
All the writing
It was all ok to me.

It was confusing & hard.
There was nothing I didn't like.
Nothing
Had to write all of them questions
I like everything about this lesson.
There was nothing I didn't like.
My group
Computer
Writing the answers.
I disliked the whole lesson.
I didn't like not getting to type.
The examples and explanations were hard to understand.
I didn't like that we had to write so much.
Rewriting the stuff I did in the other sheets.
Not able to move the cube was what I didn't like.
It involved a lot of writing in the lesson.
I didn't like making up new questions.
I didn't like writing the words
I don't really get it.
I wasn't thrilled about it because you have to remember most of the things you saw on the computer.
I did not like most of the lesson, it was boring lesson.
I didn't like this lesson at all cause it was boring.
I didn't like this lesson.
I didn't like it because I got really confused on the last 3 questions.
We had to write too much
just nothing
When I couldn't think about what the answer was.
I didn't like have to figure out how to put it together.
The lesson seemed like it asked the same questions and not enough questions. They needed to restated with different ones.
I thought the questions were a little difficult.
I didn't like this lesson because it was just….
It wasn't all that exciting.
The questions were not interesting.
I didn't like answering the questions.
Trying to remember what each thing did.
I did not like this lesson because it had too much writing.
I did not like that the whole lesson was question/answer.
I didn't like the questions that I didn't understand.
I didn't like that we had to write so much.
I didn't like some of the questions. I didn't like the groups.
What I liked least about this lesson was that I had to try to remember.
The thing I liked least about lesson 4 was not finding out what it was (the answer).
I worked by myself and not with a partner.
The thing I least liked about this lesson was that at all the info I put together I didn't completely understand it and I also didn't like the relating to the scientific inquiry.
The scientific information on this lesson, it was a little bit hard for me to understand, that is the part that I liked the least about this lesson.
I did not like the computers for 3 days.
I didn't like that we had to write a lot. I didn't like that I didn't get the answer to the problem. Then, I hated that it was only a 3 day project. It should have been more so we could analyze our data more.
I didn't like writing in the boxes, but it was still fun.
I didn't like when I had to write all the information. I didn't like when I had to put all the information together.

I hated having to make up and answer questions. I couldn't really think of information to put in the analyzing box.
I liked everything about this worksheet. I was very interested in it.
The only thing I didn't like was that it was confusing.
I didn't like the examples and explanations, they were weird. The scientific information was difficult too.
I did not get the maps that great, I did not like the materials I had to read.
I did not like how we did not get much info. I didn't like how easy some of it was.
There was not one thing that I didn't like about this lesson because it was fun. I learned a lot about what they really have to do. I thought that we should do things like this more often.
I didn't like not knowing what caused all the sickness in Truman Middle School and wondering why they were absent and also where they went and what were the symptoms.
The things I didn't like were having to have a lot of notes in order to do well in the end.
I should have taken more notes. I thought that the questions were a little hard.
What I like least was the questions weren't really questions and they confuse me. What I also disliked was the lesson didn't make me think about new questions.
What I didn't like was that I should have taken more notes than I did. If I would have taken more notes, I would have understand it better.
I didn't dislike anything about this lesson. It was a pleasure and very interesting. I couldn't have done better.
It had a lot of work. We went into groups.
I didn't like how much you had to write.
The worksheet was hard. There wasn't a lot of time spent trying to save the case. It wasn't too hard but not too easy.
I least liked the writing and the reading. I think that another thing is that we couldn't go on.
What I liked least about this lesson was that they gave us the same questions twice.
The ending could be better and/or more interesting.
I did not like keeping track of the 4 different schools.
I didn't like to squeeze it all into 10 minutes. I don't like to be rushed.
I didn't like that we couldn't get the answer. The project was over when there was 3 places to investigate.
What I didn't like was that we were not given a clear cut answer. I wanted to know if we solved the problem. If we did, I would feel better.
I didn't like how we got to solve it. I didn't like this page, it was hard.
I did not like the fact you did not tell us if we were right. I did not like that we could not conduct the experiments we wanted to.
I didn't like that we didn't find out what was the cause of the sickness. I think there should be another day telling us what was the cause.
I didn't like the last worksheet because it made me nervous about what I put.
What I didn't like about the last lesson was it wasn't the most fun day. All you did was write. It didn't have the best examples or explanation regarding understanding it.
I didn't like that I didn't get to know the answer after I was done.
I didn't know what happened at the end, like the source. It was not very interesting.
I did not like how it ended without even telling you an exact answer and we did a lot of work to not be able to know the answer.
What I liked the least was that you couldn't finish it because it left you hanging and I don't know who started the sickness. Also, the materials were not that easy to read and understand.
The worst thing was they didn't show us what happened to the kids. I would like to see the sicknesses also
I didn't like leaving the fact that we were left hanging at the end. An extra day with more evidence would have made it more enjoyable.
I didn't really like the paper that we had to do. The one that said like the memos and you had to write 3 things about them.
The part that I didn't really like about this was that we didn't get to see the results….
I didn't like how we didn't find out what was the cause of the sickness. We should have been able to continue to find out what happened.
We did not solve the investigation. I wish we had another day to get more information so we could actually solve this investigation.
I didn't have all the information that I should have had. I didn't like all the questions.
I didn't like what my partner did if I asked him a question, he didn't even know! Also, I wish again that I knew what happened and it was realistic.
I didn't like how we had to rush because of the limited time that we had. Also how some of the questions were just like each other and confused me. We never answered our questions. I want to know!
What I didn't like was that I had to ask and it felt like cheating and they never told us how they got sick.
What I didn't like is that there was three possibilities. So, it wasn't really solved.
The thing I liked least about this lesson was that we never got to solve the "mystery". It just kept going on in question form.
I didn't have a computer for the end. I didn't have good notes. I didn't like that we don't know what happened to the students.
It took me a little bit to start writing.
I didn't like the part when we couldn't find out what actually happened to the kids to make the kids sick. I also didn't like when we couldn't do it longer.
I hated how we had to write so much stuff down. Wanted to work alone.
We didn't get a final answer. I didn't like that the kids got sick.
I did not like it when we had to write and also when I had to work by myself because everybody else have partners.
Well, I didn't really not like anything. I liked the whole thing. I also didn't like the fact that they never told us what really happened to the children.
I did not like the lots of writing we had to do and had the fun, but not the writing part. I did not like that. I did not like tell us what was the sickness was not told.
What I liked least was that you had to rush and you weren't allowed to find the answers.
We did not have enough time in class to do this paper. Did not find out what really happened.
I did not like the charts on the computer. I didn't like it

because I do not know what happened to the kids it don't tell.
I didn't like the fact that my notes weren't filled in much. So, I couldn't really do my best work. I also didn't have enough time to do good work. If I had more time, I would have been able to do better work along with having more notes.
Again, I didn't like the amount of writing we had to do. I think each team should've only been responsible for one question and one answer. (A good answer).
I didn't like that we didn't know what happened to the kids.
I didn't like that we couldn't use the computers. I didn't have a lot of info and it was too much writing.
I really didn't like writing, but I had to do a lot of writing on the worksheets but I managed to get through.
I didn't like writing all the answers. I think we should have only been responsible for one question per team.
I didn't like the writing.
What I liked least about this lesson was that we had to write a lot.
I don't like to write a lot, but I didn't mind.
I had to write a lot and I dislike writing. Some questions were a little confusing.
I didn't like the part when we had to write and it was boring.
The main thing I didn't like about it was that I actually had to write about it.
I didn't like writing everything down.
What I liked least was ending the lesson because it was fun and interesting and I would have liked to know what was the cause of the sickness.
I did not like writing all of the evidence on the worksheets. The information was sometimes overwhelming.
Too much writing
I didn't like having to write everything down on a piece of paper.
I didn't like that it had all the useless information because you didn't need all them maps, graphs and all the other reading because I do not like to read as much as it had on the website.
I didn't like the writing part because I was not here the first day.
None, but I had to work with a partner when I work better alone.
I didn't like the part when we had to talk about testable questions in the beginning.
There were lots of questions where I had to guess.
I didn't like the survey because it was kind of non-detailed.
Don't know
I didn't like answering the "final questions" about the Health Department thing.
I didn't like taking the survey.
This lesson didn't have any hands on activities. It was all writing and listening, though the listening wasn't too bad.
Questions
I didn't like the survey (true/false survey) very much.
coming up with the answers
I don't like just sitting down and writing because then my hand gets cramps.
The thing I liked least was sitting down and saying the testable questions.
making testable questions
All the talking.
I had to think really hard.

boring
The worksheets
We did a lot of writing
Too easy
How boring it was
Having to write and look for information
It was tricky
Switching from site to site.
I didn't like figuring out questions.
It wasn't very interesting.
We didn't do any research or experiments.
It was boring.
The paragraph homework
I least liked how we had to write a lot and it might of not given enough info.
I did not like all the talking involved in this.
It was boring.
Collecting data & doing work.
I had to work very hard
Looking it on the computer
The least think is that when we have to look for more things that we have to do.
There were a lot of questions.
It was a little difficult to understand.
I did not like answering the questions.
The writing
that it was kind of not interesting for me
It was kind of hard
I disliked the fact that we took so long to do it.
We had to review
The lesson was boring
It wasn't very fun.
At a couple of times, it got a little confusing
Filling out pages.
Filling out all of the papers
Filling out the worksheets.
Unnecessary information
Having to write a lot of evidence.
All the writing and keeping track of all the papers was annoying.
It was confusing about what you had to do
The computer web page was really confusing and difficult to comprehend.
I don't know
It was kind of boring and was really simple.
Taking such a long time on it.
How hard it was to explain my evidence.
It was a little confusing.
I was writing the same thing in a sentence plus why it helped.
It was a little too much writing.
It was really easy.
That some of the stuff wasn't very informative and that we didn't really know what to do.
It was about www
It was a very long lesson.
It was a kind of confusing website.
Surfing through the website, it was very interesting.
I actually liked everything on this website. It made me more resourceful.
I don't really know
I really enjoyed this lesson so none

It wasn't fun.
It had a bad topic
At times, it was slow and got a little boring.
Writing everything down
I had no idea what I was doing most of the time.
It wasn't the beginning
I didn't 't like only having limited access to the website.
It was too easy and it was pretty boring.
The graphs
I couldn't find enough data suggesting one outcome.
I could think of various solutions, and this didn't really help me think of a conclusion.
Explaining
The explanations are hard to read.
It wasn't exactly exciting or fun - it was just like a worksheet or something.
There isn't anything I can think of that needs improvements.
It asked too much
I didn't like the subject of the lesson.
Well, after spending time on the website, this seemed a little boring. It could use some more visuals.
I didn't like how the website was set up.
It was boring.
I liked it a lot.
I wouldn't completely understand it all.
Reading the graphs
We had to write a whole lot.
It seemed a little redundant.
I didn't really understand what we actually supposed to do.
It was boring.
I liked everything
You had to write a lot. Nothing was "hands on".
Getting back to the site.
There wasn't anything specific that I disliked about this lesson.
Having to think about how everything came together.
I just didn't like this one.
The time it took to finish
The worksheet
The length
Writing
Having to explain a lot of details
It was hard to understand the question.
It was a little boring.
Nothing really
It wasn't very interesting.
The easiness
It was not very interesting.
Not hands on
It didn't make sense
It was a little flat
I thought it was hard to remember <u>all</u> of your steps and write about how it was helpful or not.
I still had a question at the end of the third section. There should have been at least 5 days.
I didn't like analyzing my evidence, because I already knew how my evidence led to my conclusion.
It wasn't extremely fun and interesting.
The discussion was a tad boring; maybe too long (?)
I didn't like this lesson is because it was a little bit waste of time. Since I already pulled the information together in my mind, and I don't think I have to do it again.
It was boring.
the boring run of the mill questions everyone has
It wasn't really much of a lesson, we just talked about how the different…
This activity was not very interactive, so this is what I disliked about this activity.
I liked least that the purple sheet repeated questions so you had to answer the same one twice.
I didn't think it was necessary to both discuss and write down how the evidence related to our testable questions. Just the discussion would have been fine.
It was too long for such a short assignment.
That we didn't get to discuss anything.
It was boring because all we really did was write stuff down.
Testable question sheets
Very easy, boring, pointless waste of time.
too much review
It was a little bit boring, and sometimes hard to remember.
It wasn't all that interesting, and we didn't do much. We just discussed what we did.
You had to basically write down the exact same thing you wrote down during the investigation.
I didn't think there was anything in this lesson that I seriously disliked.
A tad boring.
We had so many worksheets and papers, it got confusing.
That, basically, we were getting most of the same information as in Lesson 3.
I like everything
Wasn't anything I hated
Questions / Notes
That we didn't do an experiment.
We didn't get the actual answer to our investigation.
Nothing much
We couldn't decide on an answer.
Everything
Everything
The testable questions
I disliked everything about this lesson.
Everything was fun
I got confused.
I liked this lesson.
The fact that we had to write a lot.
I found it hard to relate.
I didn't really like the part where we actually had to figure out how everyone got sick. It was kind of difficult.
Having to put all that stuff together.
I didn't like that it was easy to figure out.
Having to write down the questions.
Everything
What I like least about this lesson is how boring it was putting it all together.
I disliked the worksheets.
I did got annoyed during the time where we just listened to a lecture about things we already knew.
Had to talk about it.
It sucks
I liked everything about this lesson.
I didn't like that we had to link it back to Lesson 1.
The people on the map I did not know what they meant.
I disliked nothing at all, it was pure entertaining brain food.

Working with friends.
It was easy
writing the worksheets
Nothing
I didn't like anything the least.
The graphs of teams and people who were absent.
Mostly, talking to my group.
I didn't like this whole part.
Got boring after awhile
Not a thing
It took a lot of time and effort to put it al together. I got frustrated sometimes but I got over it and finished all the work.
When I had to write & stupid "code name" instead of my real name.
I hate putting together pieces of puzzles so putting clues from a scientific investigation wasn't too much fun for me.
I didn't like the calendar, it seemed useless to me.
It's just like doing something over, but it helps me when on it. I'm going to take a test.
I liked it all.
Writing
All we did was put things together so it wasn't hard.
Well, this lesson was kind of boring at the end.
What I liked least about this lesson was it is the same as one of the ones that I did before this one.
How long it took.
There should have been more to it.
When we started the lesson
The worksheet "what helped us the most was the worksheets".
I liked everything.
This lesson seemed the most boring of them all.
Having to rewrite things all over.
The whole thing.
Nothing, I liked everything

What I didn't like was that a lot of people didn't have a reason why they were sick.
I didn't like answering the questions.
I didn't like that we never found a cool answer to our investigation.
I did not like the graphs they were hard to read.
Putting it together
I didn't like to fill out the worksheets.
It was too long.
Nothing at all
Not getting to do anything
I didn't like this lesson because of all the writing that was required.
It was too long
That all the people that went swimming went to the cheap chicken hut
there was nothing wrong, I liked it
Adding everything up
It was boring.
I don't know
I would have liked to read about it.
It was a little boring.
Trying to put it together
It was boring eventually
The maps again.
It was sort of boring.
everything
It started to get boring doing one thing over and over.
Didn't have one.
The teacher told us what to look for and did all the work, we sat there looking at the packet.
It was extremely useless, and boring because in my opinion it was a waste of time.
Collecting data

Lesson Comparison

Comparison of Lessons:

Table 32. Perceived Lesson Difficulty for the Students as Rated by Teachers

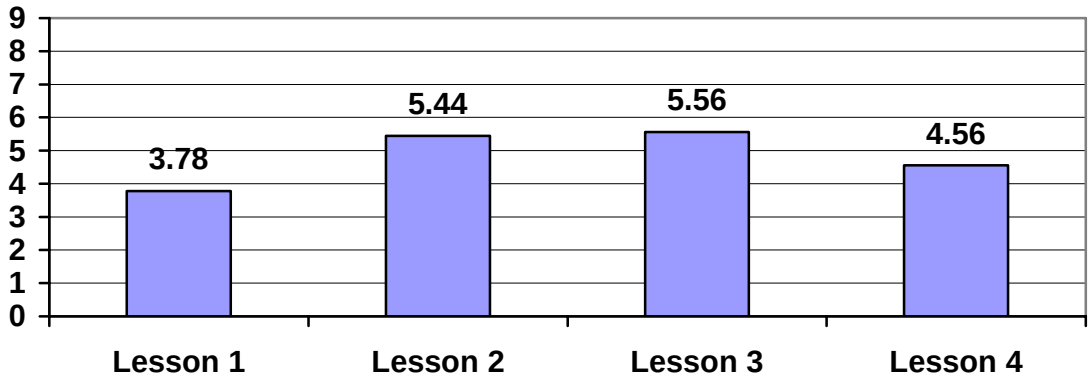


Table 33. Perceived Difficulty: Students vs. Teachers.

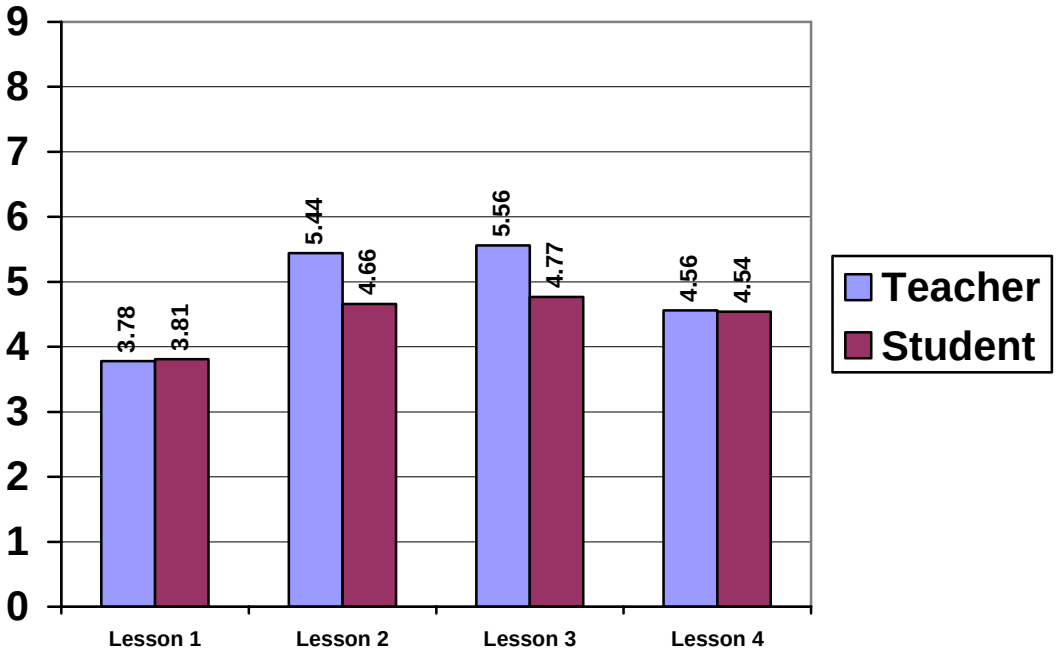


Table 34. Comparison of Lesson Levels: Difficulty for Teachers

In discussions of the utility of replacement or supplementary modules, the notion of difficulty of the modules and individual lessons comes up frequently. Tables 32-34 are comparisons of the levels of difficulty for each lesson. The scale used for all these estimations by the students and teachers was a line across the page with three easily identifiable equidistant points to mark a judgment. At the left extreme was 1 = Extremely Easy, in the middle 5 = Just Right, and at the right extreme 9 = Extremely Hard. The averages are all in the middle range, close to "Just Right"; or on the easy side, therefore we must conclude that for this module the developers hit their target. The estimated difficulty was slightly lower in student estimations compared to teacher estimates in all cases. Table 35 depicts the number of class periods required to cover the materials.

Table 35. Class Periods Spent On Each Lesson

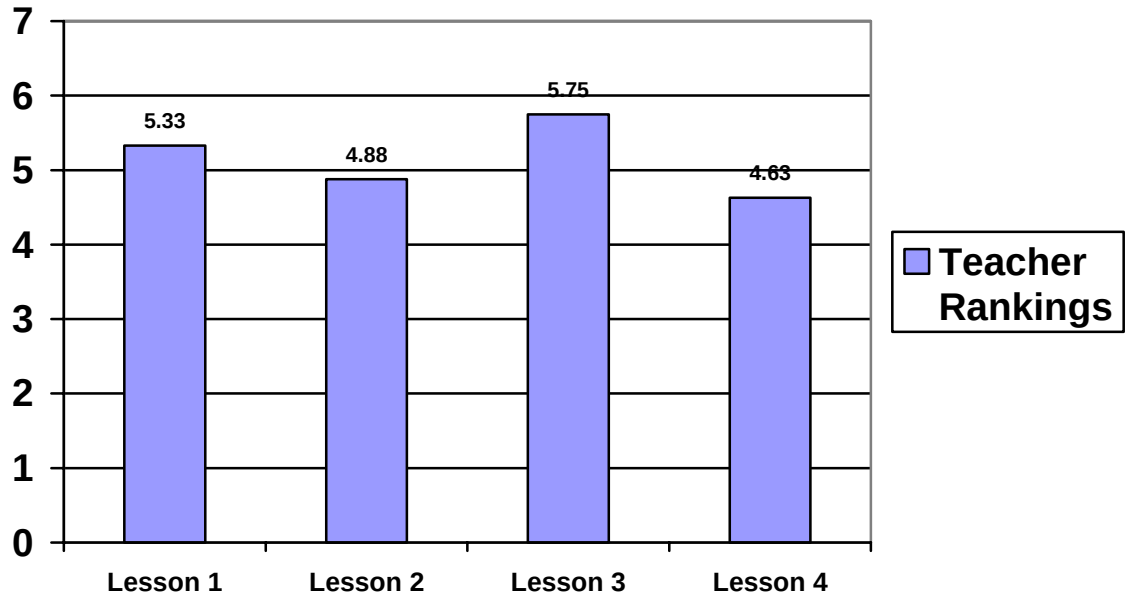
	Average Number of Class Periods Spent on Lesson
Lesson 1: Inquiring Minds	1.33
Lesson 2: Working With Questions	1.44
Lesson 3: Conducting a Scientific Investigation	2.22
Lesson 4: Pulling It All Together	1.33
Total of Averages for all 4 lessons	6.32

Table 36. Comparison of Means of Teachers and Students on Level of Difficulty (Scale = 1 - 9)

	Teacher Difficulty (Prep, Teaching, etc.)	Teachers' Perception of Difficulty for Students	Students Self Reporting of Lesson Difficulty
Lesson 1: Inquiring Minds	5.00	3.78	3.82
Lesson 2: Working With Questions	3.89	5.44	4.66
Lesson 3: Conducting a Scientific Investigation	4.0	5.56	4.77
Lesson 4: Pulling It All Together	3.11	4.56	4.54
Average Difficulty	**4.00**	**4.84**	**4.45**

Table 37. Rankings of Lessons.

Teachers Perceived Effectiveness of each activity. (Scale 1-6). Teachers were asked to report the overall effectiveness of each of the lessons. Table 37 is a graphical representation of how each lesson was ranked by the teachers compared to the other lessons. **Lesson 3 rated the highest, lesson 4 the lowest.**



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Overall Results

Overall Teacher Results
General Questions about the Module:

Table 38. Content:

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The content was a valuable addition to my curriculum.	0	0	0	0	44.4	55.6	5.56	.53
2. The examples and explanations were appropriate for my students.	0	0	0	0	55.6	44.4	5.44	.53
3. The amount of prerequisite knowledge required to understand the lesson was acceptable.	0	0	0	11.1	55.6	33.3	5.22	.67
4. Students could understand the scientific content clearly.	0	0	0	33.3	33.3	33.3	5.0	.87
5. The supplement could replace some lessons in my current curriculum.	0	22.2	0	11.1	44.4	22.2	4.44	1.51
6. The content was related to real-life examples and/or students' lives.	0	0	0	0	44.4	55.6	5.56	.53

Comments:

I reviewed what students knew about Scientific investigations, experiments and the scientific method shortly after returning from CO and about two weeks before starting the unit. We have not studied bio med, habitats, or food webs yet so that was 1 area they had to reach for previous knowledge. I have nothing like this - so I will just add it in! We had our own viral epidemic during the implementation REAL LIFE!
I would not replace lessons in my current curriculum, but I would use it to preface some of our courses.
I think the students really understand inquiry after this unit.

Table 39. Graphics: (Photos, Clip art, Illustrations, Tables, Maps, Graphs, etc.) In the Masters

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The graphics were clear and meaningful.	0	0	0	11.1	55.6	33.3	5.22	.67
2. The graphics helped students understand the material.	0	0	0	11.1	55.6	33.3	5.11	.78
3. The graphics promoted student thinking, discussion, problem solving, and inquiry.	0	0	0	0	55.6	44.4	5.44	.53
4. The graphics were engaging (that is, they got students doing interesting things).	0	0	0	11.1	44.4	44.4	5.33	.71

Comments:

The students are looking forward to seeing the videos, reading the interviews was time-consuming and many are resistant to reading. As the teacher, I'd like it to stay as it is because despite the reading resistance, the students did read them and with video, they wont. I think the graphics were excellent. The students looked at the graphics for long periods and interpreted them in detail. That was great! I think they spent the least amount of time on the graphs of attendance data. I pointed out how the graphs were different scales on the Y axis which most had not noticed. I plan to go back to the computers and do some graph lessons with the students. There are lots of ways to expand on this.
Cubes are great, simple tools.
The only use graphics in the masters were for the cubes - rest were basically text.
Since I did the web-based version, I did not use most of the printed graphs, tables, etc. However, those on the Biological Boxes & Mystery Cubes worked fine.
Most of the time they were clear, but not all (see p.7 back comments).

Table 40. Website:

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The students were able to navigate easily in the website without confusion.	0	0	0	0	87.5	12.5	5.13	.35
2. The website made the major concepts more understandable.	0	0	14.3	0	42.9	42.9	5.14	1.07
3. The website made the lessons more interesting.	0	0	0	0	14.3	85.7	5.86	.38

Comments:

There definitely needs to be links added so students can navigate between activities 1, 2, and 3, My students wanted to go to a previous lesson for more info. And had to click on back way too many times.
Our students are pretty computer savvy. They have several computer labs throughout the building and recently I was part of a grant that brought in a wireless laptop mobile cart with 24 computers. The kids were given the computers before I started the unit and we "bookmarked" the website address to expedite getting online each day. The kids loved the daily memos.
While students always enjoy working on computers, some students did get lost trying to remember which activity held which evidence.
This was much enjoyed by my students. I couldn't imagine doing this activity in the paper version.
The web didn't make it more understandable, just more interesting.

Table 41. Teacher Background Materials:

	Strongly Disagree 1	Disagree 2	Disagree a Little 3	Agree a Little 4	Agree 5	Strongly Agree 6	Mean	Standard Deviation
1. The teacher's background materials helped me understand and support the lessons.	0	0	0	11.1	55.6	33.3	5.22	.67
2. The implementation materials helped me teach the activities.	0	0	0	11.1	11.1	77.8	5.67	.71
3. The relationship between NSES's content standards and lesson-specific concepts were clearly presented in the teacher background materials.	0	0	0	11.1	33.3	55.6	5.44	.73

Comments:

The teacher background material is like getting a mini college course on teaching Scientific Inquiry. It also gives a great explanation of the 5-E teaching approach which I love and is encouraged by my administration. We are currently re-writing curriculum to match 5-E teaching and Focusing on enduring understandings instead of a minute of details & facts. I've attended many inquiry-based teaching seminars but none have done as good a job concisely putting together the necessary information and ideas needed to do it successfully as your package does.
Excellent job! I appreciated the suggested responses. It was also quite helpful having run through the curriculum in January.
I honestly did not refer much to the standards relationships, as this is not a requirement in my teaching location. However, looking over the materials they were well written, user-friendly & made good connections.
Everything was clearly laid out and well-explained

Overall, Teacher Open-Ended Questions:

Describe how you used the materials

I used the materials as part of my unit on Bacteria / Viruses / Infectious Diseases. We have spent 5 days so far on bacteria and viruses then worked on this module. I kept very closely to the script unless I just knew it wouldn't work. For example, I modified the discussions in the computer lab and spent more time with Lesson 4 discussing their findings.
I used the supplement as an extension of a previous unit on "Measurement and Scientific Investigations". (Science classes only)
First of all, I read the materials carefully, highlighting the parts that I wanted to focus on most. I also, made notes in the margins of my scripted lesson instructions so I would remember where I wanted to implement different suggestions. I used page 33 to explain to the students what an epidemiologist was, especially needed after I told them that that was what they were going to be for four days and they looked at me like I had just called them a nasty name. :-)
Didn't use @ beginning of year. As instead, sandwiched between unit on communicable disease and a unit on student-generated testable questions & inquiry projects - a great fit. I followed the instructions in the order presented and added transparencies for instructions for student code and one for "Don't touch the Cubes".
I used the materials as described in the teacher's manual.
I followed the format just as presented in the guide. What made it difficult was the distractions I had working with three grade levels; State Math assessments for 7th grade, State Reading assessment for 8th grade on a different day, etc. The result was that most of the classes were at different points on any given day. That is not a problem with the curriculum, but it perhaps skewed the flow of the lessons. In the future I plan to start the year with 6th graders working this unit, and that will solve this issue.
These materials were used as a supplement to our normal curriculum. In the future, I would use these materials at the start of the year & then base future activities / investigations / labs on the information learned in the curriculum.
I used the unit in between 2 units I was already planning, but was able to connect inquiry to what we had already done.
Next time I will glue the boxes onto something! I liked having the open discussions about the graphs and what interesting bits of information the students came up with.

Any other relevant information about how you used the materials:

I do have access to a great computer lab so we had no problems using the web materials for the project.
I also used the unit with my reading class to promote problem-solving skills.
I also used the Reference bibliography to add some of the references you used to my "must buy" or "must read" list. I am always adding to my own reference library and find compilations at the back of good articles / packets of information an excellent source of educational material.
Lower level students needed lots of help with testable questions.
The major prep was creating the boxes & highlighting the questions ~ this made it very easy to prepare. The curriculum was very thorough with anticipated responses. I will in the future really (and often) stress how all activities relate to the aspect of scientific inquiry. Some students tend to look at each activity as a separate issue and not look at how they are connected.
If I had free access to computers (less scheduling conflicts) I would have taken longer on a number of the lessons. As it was, I had a schedule I was limited to due to the limited access to computers. This would be a great lesson to do in combination with computer class so a science teacher wouldn't need to do so much juggling.
One class used the website, the other 4 did not (our PC lab was only free during one of those periods).

Most and Least Valuable Aspects of the Module and Suggestions for Improvements.

The teachers were asked to respond to open-ended questions regarding the most and least valuable aspects of the module and suggestions for improvements in the module. These are the comments in order of concern:

What were the three most valuable aspects of the materials and why?

1.

I thought lesson 2 on testable questions was excellent.
The interrogation of "real-life" data represented in table and graphic form was very meaningful to my students.
Watching the students work together as a collaborative team, sharing experiences, ideas and detailed information was really great. Rarely can you leave 12-14 year olds alone to problem-solve and investigate without having to "police", redirect and "nag" them. I never once had to tell a student to get back on task because no one every was off task. :-)
Reinforcement / Restatement of inquiry skills
Cube activities were fun ways for students to emulate what scientists do; all students were able to positively contribute to this activity.
Using the cubes to introduce the unit. It was a great book, and was extremely appropriate in relating to scientific inquiry.
The level of participation for students. This was not a teacher-centered curriculum, & thus students were able to explore / learn based somewhat on their interests. This was most apparent during Lesson 3.
Student worksheets were valuable for assessment.
I liked the simplicity of the biological box, because it was interesting to discuss what students thought.

2.

The students really enjoyed using the computer to investigate a disease.
Incorporating writing was relevant at this time (we are administering the State Writing Assessment today!)
I liked that they unit provided a standards based curriculum, taught Scientific inquiry and investigation and used a real life scenario to do it.
Other ways to consider testable questions
Real life situation they could relate to
Using the web portion. Students are very "tech" savvy, and it added another variable to the learning instruction.
Ease of implementation. Other than photocopying, computer set-ups & mirrors…there was very little to do in order to use this supplement in the classroom
Background info was valuable for making me comfortable with the content.
I liked the easy to read graphs because it is a skill every student master-graph reading.

3.

The materials allowed me to easily use scientific inquiry in my classroom as everything was written in detail as to questions, summaries, student activities. I really appreciate having access to really good materials.
The cooperative learning activities were very engaging and thought-provoking.
The use of the computer technology with interactive graphics was a big hit!
Skills learned applicable to science & science inquiry.
Students were in charge of the investigation - while data helped to direct their investigation, there were several ways to get there. Students have incorporated "testable questions" into their vocabulary.

The valuable class discussions that were generated - especially 6th grade were insistent they were to participate!
Quality of websites…the kids thought they were real!
Suggested discussions helped gear me toward what the students should be learning.
The well laid out, methodical theme from one lesson to another.

What were the three least valuable aspects of the materials and why?

1.

Lesson 4 needs to be more engaging.
The assessments were ok but not great. I would rather have the assessment be the final Analyze Evidence & 3 investigative forms. The Question / Investigation paper was not well understood. The Biology box was too repetitive of what was already done. I saw no value in the Final request about the biology box either.
Lesson 4 review - this might have been better done as a transition between activities in lesson 3 - a better summary for this age might be pointed, leading questions that invite speculation (open ended)
Limited data so investigation could not continued or extended.
Lesson 4 ~ Filling out the form with the 7 aspects of evidence. Students felt it was duplicate work which could have been used as a class discussion instead.
Lack of flexibility for some students. These maybe kids that need to go slower, or want to take their investigation to a deeper level.
Lesson 4 was not very useful. It could have been tacked onto lesson 3 and lesson 4 should have been something new.
I didn't so much value in the maps, but some students did - different learning styles.

2.

The cubes need more difficult patterns for the students. Some students figured them out within seconds.
The in class question sheet with the "bug blood" etcetera was not easy to teach. It was hard to get the testable point across with the given dialogue. The students need more practice forming and asking questions. Lesson 3 got this across well. I think the students need to be interested or motivated to even begin asking good questions and Lesson 2 never really grabbed them.
Sometimes too prescriptive at times; brighter students felt too constrained waiting for the class discussion before being allowed to go to the next activity.
Students didn't really need the parent interviews, but they were an authentic touch.
The limitations on slower students are mainly due to technological limitations.
Lesson 2 was a bit long (took too much time) for the point it was trying to make
The mystery cube was too easy,, but when combined with the mystery cube it was okay.

3.

Letting the students know what the real-life professionals determined the cause of the illness to be would be a nice "reward" so they could see the results unless it was never determined. (I did not reveal bottoms of boxes until after module was completed).
Dependence on computer access for best use of materials.
No central theme (i.e. environment, disease, etc.) to relate to the concept of scientific inquiry.
The testable questions because my students had a really hard time.

Please provide two recommendations to improve the materials.

1.

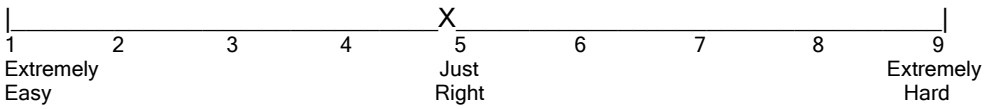
Brainstorm an engaging activity for lesson 4.
The students have difficulty with the long survey at the end of the unit. They are not used to answering using scales and when they have the same questions and scales over and over I think they get very confused. I tried to guide them through each Lesson's survey etc., but still when I glanced over them at the end of it all, I found comments written that referred to completely different Lessons. I wonder if we could change the students survey book somehow or if it would be better for them to do the survey in parts, like right after the lesson instead of waiting until the end.
See above for 1 use a hands on, open-ended lesson (such as an assembly of random parts)
A way to extend the investigation for groups who would want to pursue this further. No where in this module was the word "data" used - students understand scientists working with data - need to make more of a connection between "evidence" and "data".
Lesson 2 ~ Testable Questions Maybe consider questions not quite so abstract. I realize they were chosen for the high interest level of the students, but they were very difficult to write testable questions on. The students kept getting lost in the experiment, not the questions.
Most importantly, in the recommended time for each lesson, there is no time built in for feedback on those materials done by students on paper. Obviously, in the test situation (and with my limited access to computers) I was somewhat limited by the established sequence. With more flexibility, I would have spent additional time on feedback. For example, in Lesson 1, activity 3 I sent as homework & had not scheduled time for discussion of their responses. The same holds true for the questions in Lesson 2 (?).
Find a way to make content a little less repetitive.
Make the inquiring minds easier. Find some way to bring down the level of examples because my students couldn't understand them to figure out how to test them.

2.

Design new cubes.
Next time I build the mystery cube & biology box I will use thicker, stiffer paper because the regular copy machine paper was almost too flimsy and the boxes crushed easily. Also, as mentioned earlier, I weighted down the biological box with a square pink pearl eraser taped on the Savannah food chain (inside). Also, I taped down the mystery cube to a tray.
To construct or speculate on use and apply this to testable questions. Since this is a general science application unit, perhaps something that is not biology based might be indicated.
Additional links to get more info on stomach virus & food poisoning, students had to rely on the subtly clues in the symptoms list, wanted to know more about it.
Lesson 2 - Editorials ~ Make the three choices - separate letters. It was confusing going back and forth from the editorials and trying to stay consistent with testable questions as students volunteered answers
More "real" activities like box & attendance data. The students really enjoyed those! See 3rd suggestion in # 4 ~ have a "theme" of some sort (or at least suggestions on how to implement as a theme).

Overall Student Results.

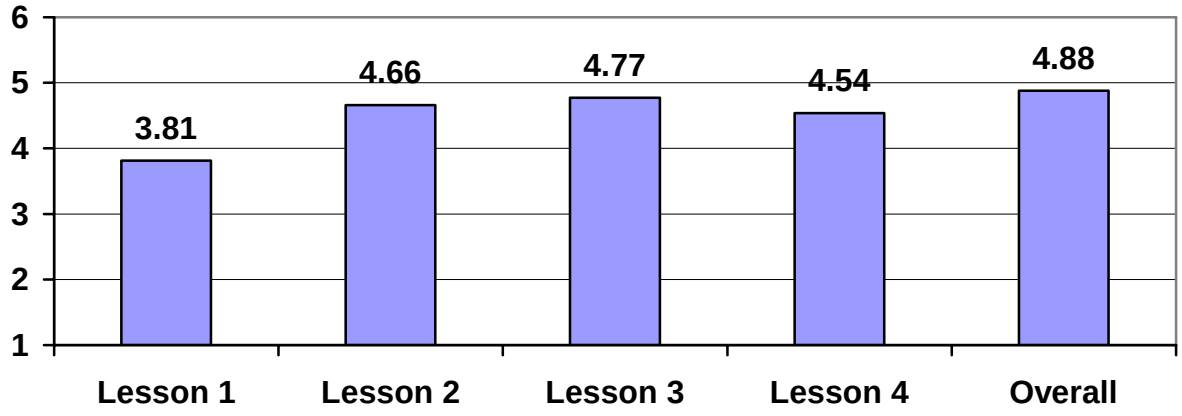
Overall Module Difficulty.
The students were also asked about the overall difficulty of the module. They rated the difficulty on a scale of 1 to 9 in which 1=too easy, 5=just right, and 9=too hard.
The average level of difficulty was 4.88, std. dev. = 1.49.



Lesson Comparisons on Level of Difficulty from Students.

The lessons each have scores from the students on several dimensions. Table 42 depicts the mean difficulty scores for each lesson. All scores were slightly below the ideal score of "Just Right" (i.e., 5). This indicates that difficulty levels are appropriate for the grade levels tested.

Table 42. Comparison of Lesson Levels of Difficulty: Student Results



Most and Least Valuable Aspects of the Module and Suggestions for Improvements.

The students were asked to respond to an open-ended question on the most and least valuable aspects of the module and suggestions for improvements in the module.

Overall, what three things did you like most about the supplement and why?

IT WAS FUN BECAUSE IT WAS A FUN WAY TO LEARN
CONDUCTING EXPERIMENTS, THIS PAPER I AM DOING. NONE OTHERS
FIGURING WHAT'S UNDER THE BOX, FIGURING WHAT'S WRONG WITH THE KIDS GOING ON THE COMPUTER
CUBE BECAUSE I LIKE CHALLENGES. SEARCHING FOR EVIDENCE BEACAUSE I LIKE LOOKING FOR ANSWERS. TRYING TO FIGURE OUT WHAT THE SICKNESS WAS.
THE INTERNET WAS FUN BECAUSE WE GOT TO DO SOMETHING OUT OF THE ORDINARY, ASKING QUESTIONS WERE OK BECAUSE I LIKE DETAILS. THE INFORMATION WAS INTERESTING BECAUSE I HAD YET TO LEARN IT
IT WAS OK I DID NOT LIKE THE READING. THE BOX.
FUN NOT TOO HARD, INTERESTING
I liked the challenge because I need a challenge. I liked the experience because I was needing something diff. I liked the questions, because I like to wonder.
Working on the website & talking about the illnesses and doing the packet
That I got to work w/someone because I usually don't do good in science. That it was fun, science is not fun usually. I don't know.
All box experiment that was the funniest and made you think the most.
Internet, Partners, knowing that we are safe because I like them knowing everything.
Talking with the class, surfing the web and being partners because it made it interesting.
The cube thing, the website, re-taking the quiz
Lesson 1 because it was cool to think about. Lesson 3, going to the computer lab and learning about the schools. Lesson 3, the paperwork was easy to work with.
It made me see what scientist go through, how people form questions and get answers.
That they were all kinda easy to do but got mix-up somewhere on the line.
1. The graphs helped out a lot. 2. The maps helped out a lot. 3. The overall ending left us thinking.
Nothing really
It really made you think because you are not asking questions like you usually do, got us out of homework.
The three things was the website and filling in the questions.
That it was not hard but kind of a challenge. I had fun. I learned some stuff.
I liked that we got to do something other than read our textbook, because that's boring. I also liked that we were chosen to help you guys out and finally, I liked that we got to work with a group.
I liked lesson 3 because it was really fun and it gave me a lot of things to think about.
Number cube, safari cube, computers
It was fun.

Being able to work with a partner through the activities and having fun. I like it because it made it easier.
1. It was kind of fun. 2. No Homework 3. It was semi-simple
1. Learning 2. Testable Questions 3. Going on the internet.
Concluding scientific - finding out how people got sick through man's investigation. Inquiry minds - made me think. Putting it all together - I was anxious to find out what happened.
We worked together, use the computers and read a lot
Some were fun, they were loaded with learning and entertaining.
That it gave you a good idea of what to do, the directions were good. It was fun and wanted you to find out what happened to the kids. That it was not too hard.
I liked the videos, the website, and the boxes.
1) That we had partners because it is better to work with other people. 2) That some of it was easy because it made it fun. 3) I do not know because I don't know.
Exploring the website and identifying their sickness and helping the kids because it was fun trying to figure out the sickness.
1) It was different. 2) I learned some things. 3) Overall, it was fun.
Nothing really
Overall, it was fun and not too challenging.
The internet one, the safari cube and the test, because I learned something completely new.
The testable questions, cube activities, investigating because they were all fun and a new experience for me.
My partners
I got to work with my friends and made the work more enjoyable.
It was easy making new sentences. I had fun finding out the problem.
I liked the storyline, I enjoyed trying to figure out what caused the students to get sick and I liked the whole project because it was something new to me.
Working with partners, it made it easier. Mostly everything.
Being in the computer lab, working with a partner and investigating
1) It was not at all hard. 2) I understood it easily, which was great. 3) We got to work w/partners and made it fun.
They mystery cube, the biological box, website because they were fun to use.
I liked being part of this and being on the computer.
I do not know what I like
I like learning about the bacteria and other viruses. I like going to the computer lab.
The cube activity, Investigation and disease break out and putting it all together.
The testable questions, because it was fun to make up your own questions. The cube activity, because you got to work in a group. Investigating the disease outbreak because it was fun to play detective.
I learned pretty much more than I knew.

Finding the answer because it was fun researching and working with a partner
We got on the internet
Acting like a scientist, making sense, piecing it together
No homework, did not have to bring my books, it took the place of our regular lesson and that was a good change.
Working with a partner, using a computer, using the internet
1) I liked it because we got to go on the computer. 2) We had to guess stuff. 3) We got to chill out to do work in class and not at home.
I liked the investigation, finding things out and completing it. It made it all interesting.
Working online (we don't do that much). Doing the simulation (they are fun and educational). There was little homework and the stuff we had was easy (nobody likes homework). Testable questions (they were new to me)
It was not at all that hard
Lessons 1, 2 and 4, because they were easy.
1) Was easy 2) liked learning 3) liked the computer
The Biological Boxes, The charts, The website
Overall, I liked the 4 lessons, the way we got to use techology and the way we came up with the evidence.
I liked working in groups. I liked trying to find out what happened to all the students. I liked working on the computers.
I liked the website cause it helped me to make tastable questions. Making testable questions was fun making them up and trying to guess what was under the cube.
Working on the internet - Lesson 3 cube activities - Lesson 1 Putting it all together - Lesson 4
1) No homework 2) No books 3) No classroom
I liked the website because it was kid friendly. I liked the investigation because it wasn't a textbook. I liked the gathering of evidence because it was mysterious. Ha..Ha…Ha..
The three things I liked about it were it was fun, interesting and challenging.
The assignment on the internet, trying to figure out the cause and the mystery cube were fun and interesting.
Going on the computers, reading the notes and collecting data, learning more about science and testable questions. I liked these ones the best because they are fun.
Doing testable questions, writing on the computer and finding evidence.
No homework, out of class and not sitting around
I liked searching for the outbreak because it helped me to learn what scientist do. I liked the cube activity because it was a good one to start off with. I liked the testable questions because they helped learn how to make a question that I could try to answer.
1) Getting to go on the internet and look why kids were getting sick. 2) No homework 3) Activities that weren't just on paper.
Investigating, got to go on the internet. The mystery of it all, exciting. The animal food chain and environment, like animals.
I liked the cube activity, the testable questions and the websites because it made the project more fun.
1) learning new things 2) the website 3) finding out there are not always answers
Using internet, finding answers and making up testable questions because they were easy.
It was fun, made me think and no homework

It went fast because I understood it.
I didn't no like anything. It was ok but not really fun.
I liked that we got to find out sickness
It was fun, because we got to be with friends. We learned stuff, we learned how to make good testable questions.
Three things I liked were; finding what caused the illnesses, what was on the cube and the putting it together.
1) Working partners 2) Figuring out and answering testable questions. 3) Learning how to conduct an experiment
It was fun, interesting and challenging.
I liked working on the computer, finding out info for the outbreak and putting it all together because I have never done this before.
Almost everything except, having to go onto the computer
Cube activities because it was easy. Investigating the disease outbreaks and putting it all together.
Graphs, data and experiments
It was fun, interesting and taught me some things.
It got us off homework, I hate homework.
All of it, because it was very fun.
The computer lab project because I like working with computers.
1) The cube activities-they made you think. 2) The testable questions-they helped me understand the concept of a testable question. 3) Investigation-was fun finding out the illness.
I liked thinking of things I want to know about. I liked working with partners. I liked some of the work.
Internet makes it fun, partners make it fun and nothing else.
I liked working with my partner on the questions and the website and I liked the biological box because they were fun.
1) The website 2) Being scientists 3) Thinking hard
1) We got to use the internet 2) We got to work in groups 3) We learned more about scientific questions
1) When we were on the computers 2) Investigating 3) Finding information
1) It was hard 2) It was difficult 3) Was not easy
Groups and partners, you got to interact
That it was interesting, fun because it was fun to learn
I liked that it made you think of new things.
I really liked the internet activity the most because it made me feel that I was in a career
Working in a group, getting online to discover things, talking with the class and sharing info. 1) because we could all try to find out stuff 2) It helped speed up process. 3) If you didn't get something someone did.
Finding out what was wrong at the school because it was fun.
1) That we got to think about new questions. 2) That we had partners to help us think about things 3) That we did this over the internet.
It reviewed all the things I did and learned. It was fun kinda
1) The computer 2) The cube 3) And writing what I thought about the supplement.
The research, the real life problem and the available info. They helped me understand everything better.
1) Going on the internet because I think the idea of it encourage some people to really try on the overall supplement. 2) Working in groups so that we could discuss different ideas/opinions. 3) Going over piece by piece pretty thoroughly as a class.
1) Made me think, because it's boring when you don't even

have to put a little thought into it. 2) Interesting, this lesson wasn't boring, it was very fun & interesting. 3) Professional, my group & I felt professional when we had to come up with an answer why the kids were sick. It felt like our answer really meant something.
1) It was interesting & at the same time fun. 2) It was a real situation (Truman Middle School) 3) It was not very hard long.
That we had to find clues and answer questions. Make new questions for the next activity.
I liked the internet. I got to work with friend that's all.
Blaming people
1) We got to use computers 2) Got to work with groups 3) Got to work on our own analysis.
1) Research 2) Investigation 3) Learning
The computers made you think outside of the box.
Looking online, talking to group, finding info because those are fun things to do.
It was intriguing information
The internet. It helped eliminate things a lot. The cube. It was cool, we worked together. The health thing. It was fun.
1) It made you think 2) I learned what type of questions you can ask 3) I learned what type of evidence you can get.
1) It was online 2) Easy to read 3) It gave us videos
1) We got to do experiments 2) We got to compare results. 3) We got to put into real life situations.
The independency about reaching our own conclusion fun to do
I liked the using of computers, the maps or diagrams and the graphs the explained a lot for this activity.
The maps and everything on the computer well most of it & finding out the answers exciting
freedom to use internet having a group to work with it tested our minds
When something is fun you like it more! Challenging good
Didn't really care I just did it.
1) I was pretty good learning experience because it made you think 2) It was a good and well thought project 3) I liked because you really had to think to get the answer.
It was fun & interesting
going on the web to find dues because reading on paper is boring. Was fun I liked being in graphs
The website, because it made information easy to get to.
1) We got to ask questions 2) It made us think 3) It gives us a bit of what scientists have to do
We used computers some of it was easy
The cubes because it was fun and that stuff interests me.
The computers
1) Most things were easy 2) I learned how to make questions. 3) It was fun
It involved thinking, we asked questions and it was cool
Acting as scientists and trying to find out the unusual illness that was spreading throughout the schools.
1) partners 2) cooperation 3) computers
1) I liked how we had to investigate about the reason many students were absent 2) I liked answering the questions in the second lesson 3) I also enjoyed how we had to work in teams.
The question because it made me think more talking to the class about it.
The website, the box and questions because they made me think that there is more to science than meets the eye.
1) I was able to understand 2) I was able to relax 3) I was able to get a good grade.
1) that we worked in groups cause I wouldn't have done good individually. My friends helped me. 2) We worked on computer. We don't get to use them much, especially in science.
1) They were interesting 2) they got me thinking about different topics. 3) They helped me understand science / testable questions better.
1) It was kinda fun 2) It was thoughtful 3) I like doing projects
I liked the way we all thought and not just one of us because we all got in it
1) made you think more deep, like a scientist 2) helped you make testable questions 3) helped us by showing how to get evidence.
1) I liked how we worked together 2) I liked how we tried to solve problems 3) I liked how we kept on asking questions.
1) I liked using the computers because it's easier than just like using a book. 2) I liked working in a group because I don't think I could have done it by myself.
1) The testable questions because I learned something new. 2) The cube because we had to figure out what was on the other side like scientists. 3) I just liked the whole thing because it taught me what scientists have to go through
Nothing because it was boring
1) I liked how it was kind of like solving a mystery 2) Interacting w/other people 3) You using a computer and having many helpful resources.
I liked it all I learned a lot of new things
1) I liked working by myself because nobody was copying. 2) I liked disagreeing with the work sheet. I knew the stuff that could hurt your ears. 3) I liked that it was on the computers because it was easier we could not lose anything.
1) They were challenging, but with our groups, we could find the answers. 2) I felt like I was a real scientist trying to solve this mystery.
1) Working with computers 2) Working together trying to figure it out. 3) That this was more challenging.
some of it was fun I really got to think about things differently and I got to investigate a problem
all of It because.
1) It was kind of easy 2) It was short 3) It was fun
1) It was a good activity 2) Fun for a lot of people 3) It was interesting
1) the data 2) getting ideas from others 3) coming up with questions
1) Involved all elements of good study 2) Involved modern technology (computers) 3) it was generally easy to follow
The investigation
I don't know
I didn't like three things I liked the computer and some that were easy
working with questions, inquiry minds & putting it al together
1) I liked doing the cubes because it was fun and educational. 2) I liked it when it was over because it was over 3) I liked it when we started finding the explanations.
1) it was easy 2) it was quick 3) it was fun
1) I liked that we were able to work with real data nd fake.

2) I liked that we got to work in groups. 3) I also like that we were able to find things out like with the information.
it was too easy
1) Having to look it up online. 2) Some questions were actually challenging & fun. 3) Having to find some answers online.
1) it was fun 2) it was cool 3) finding out what was on the other side
I don't know
The questions, the connecting that was done, the overall thing. It kept me interested a little
1) It made me think 2) Helped me with developing better questions about scientific inquiry. 3) Helped my knowledge about science in the "real world". Why? Because it was interesting to do and easy to like.
Facts, etc.
1) It was great to play someone who tried to figure out what was wrong. 2) The graphs were interesting 3) The questions were fun to solve
We worked with groups, learned and it was fun.
1) The cubes - they were fun & interesting 2) The website - it was helpful & well put together 3) The conclusion - I just like writing conclusions (and it means you're finished with whatever you're doing) :-)
The website because I pretty much understood it.
working in groups, get information with my friends and learn new stuff, it was fun.
1) looking for answers 2) really having to think about the questions. 3) learning how to ask better questions.
It made me think. It was a hands on activity.
I liked working in groups, some of it was fun
I liked all of them because they were all interesting
I liked the website because it was interesting, the data export because it helped and the cubes because they were cool.
Being able to work in groups, more fun. Using computers, makes use of technology. It was fast to do, when things go on forever they get more and more boring.
It was easy, we worked in groups and we used the computers
It was kinda easy we worked in groups.
Guessing what was on the bottom of the cubes, because it made me think. Coming up with questions and finding the answers, because I like finding the answers to things. I liked finding info of the absents, because I knew I kept getting closer to the end.
1) You got to use your new found knowledge in an actual investigation. 2) You got to work w/ partners 3) There were papers to easily organize the data.
1) group work 2) internet 3) we could talk
Working in groups, cuz if you don't know how to do something they can help you.
The 2 boxes & the computers
1) we got to do stuff 2) we got to talk to each other 3) it was fun
1) working in a group 2) finding new ways to explain things 3) using a web-based curriculum
1) That we had to think a lot outside the box and that we had to do think far from what we normally think. 2) That we had to ask questions to get answers. 3) That we got to use the computer which made it easier.
1) Made you think 2) Built up problem-solving skills 3) Could relate to situations.
1) it was realistic 2) I learned from it 3) It made me think

We got to ask the questions, go through the data and find out what caused it.
1) Using website 2) Using data 3) Making conclusions
1) Easy to find 2) Explanations good 3) Info good
1) Made me think 2) branched out from everyday science 3) gave me an opportunity to communicate
I liked the 3rd lesson because it was realistic and not boring.
Working online, being able to think out of the box
1) it made me think about things that I've never thought about before 2) the website 3) the cubes
1) Using the computers, because it made me feel like I was really working as a scientist 2) Groups, it made it more fun to work with people 3) The health site, it was fun and it made me feel like I was getting the data and had to work for it instead of getting it on a worksheet.
The internet and everything else was ok.
1) The lessons made you think 2) They weren't all boring 3) They were fun
1) work - kept me busy. 2) difficulty - kept me thinking 3) Interesting - make you want to find the answer
it was cool
1) Theories 2) working them out 3) new questions
1) Made me think 2) and ask questions 3) the website looked good
1) Real life situations made me feel as if I were in it. 2) The website, made it feel real & gave good info 3) Group work, getting other people's ideas
1) I liked that they were mostly easy to understand because then I knew what I was doing 2) I could understand some of the explanations 3) I could understand the scientific explanations
Using the computers, answering the questions and working with a group.
tracing the disease, it was challenging working in groups and the Biological Box same.
The three things I liked about this supplement was when we had to find out what made them sick, when they were absent and look at the activity table.
The boxes and working with the computers
1) I was up to the difficulty because it wasn't science things that were way over my head. 2) It all fit together at the end.
We got to talk about the lesson
Working in graphs, working on the internet and making testable questions.
We got to talk a lot and get into groups and the lessons were interesting.
The lessons were pretty easy. The lesson visual, I also like communicating
1) working in group on lesson 1 2) we had to ask testable questions. 3) The computer was a fun investigation.
The first lesson I like figuring out the question. In lesson 2, I like that I figured out band was the problem. I liked everything on lesson three.
When we looked at the cube's
1) I like that we were able to make new questions and answer them. 2) I also like that we were able to get on the computer and try to solve new problems. 3) The last thing I like about this lesson is when we had to figure out what was in the bars. I like these three things about this lesson because it makes the lesson way interesting and makes them fun to solve.
1) I liked working in groups. 2) I liked working on the

computers 3) I liked working with my classmates.
1) We got to get in groups 2) It made me think 3) We got to use the computer.
1) Computers 2) Mystery Cube 3) Biological Box
Working in the groups, being on the computer and having fun
I liked working on computers, working in groups and the whole lesson.
Getting to type and working in groups and using the computer because we didn't have to work in class.
1) I liked working in groups and using computers. 2) I liked communicating with my classmates. 3) I also liked when we got in groups to help us think of testable questions.
That we got to work on computers. Also that we got to work in groups. That we didn't have to do much work in the process. I like to work in groups and on computers. Also I don't like to do much work.
I liked working in groups, being on a computer and the activity was about people around my age.
The three things I liked most in the whole unit was asking questions, using the computers and communicating with my peers.
It was an activity on the internet. There were no quizzes on this activity. This was very organized.
1) I liked working on the computer because it was fun. 2) I liked working with the blocks because we got to talk to each other. 3) I liked being a health detective too because we got out of class.
1) I liked getting on the computer because we got to look up evidence. 2) I liked the cube because we had to find what was on the bottom. 3) I liked the testable questions because we had to make up new questions.
The time we took so that we didn't have to do other work.
1) I liked getting on the website because I like to do different things. 2) I liked the questions because you get to think about something. 3) I liked working in groups because it make some people feel smart.
1) The computer investigation because it was fun to get to use something besides worksheets and pencils and you saw what you wanted to know. 2) I liked that we had a chance to think about our answers and discussing them with the class. 3) I also liked being in groups and being able to discuss answers and ask questions. (Just with the people in our groups)
I liked that I had to really think about the problems because some work that I do not really have to think. Also, Like that I got to work on the computer because most class don't get to use a computer. The thing I liked the most was that I got to work with a partner.
I liked working in my group because I had two other people to help me. I liked the mystery cube game because it was fun and it made you think. I liked working on the computer because it was the easiest thing out of the chapter.
1) I liked the investigation part because it was fun. 2) I liked working on the computer instead of having to write 1,000 things. 3) I liked working in groups so you could have more opinions.
What I like about it was that it made you think. It made you investigate and analyze things. I liked about it was we got to use charts that helped us.
1) It was fun to do hands on activities. 2) We were in groups to talk about it. 3) We could ask questions.
It was fun
1) That we had partners in a group to work together 2) We worked we did fuss about anything if we didn't know the answer or wasn't clear about it then we called for help. 3) We didn't ask the teacher all the questions we did it on our own until we need help.
1) I liked exploring the web for answers because I got to research. 2) I liked putting it all together cause it made it more fun to try to find out what happened. 3) I liked the mystery box because you had to come up with a theory.
1) I liked the investigations because they were easy to do. 2) I liked the game using the boxes because they were easy to understand. 3) I liked working on computers because it helped me understand the subject better.
Overall, I like the mystery time lessons we had, the easy info they gave us and the different lessons they gave us.
1) I liked the lesson about the band students at Truman and Jackson middle school. 2) I thought the materials were great in the lesson about the unhealthy restaurants. 3) The lesson about the mystery cube was very thrilling.
The 3rd lesson is good because I like computers.
1) Being able to learn new things because I didn't know them. 2) Being able to work with the computer because it was fun. 3) Not having to do normal class work because it's boring.
1) The questions were kind of interesting 2) It was kind of fun finding the information 3) It was easy to do.
I liked working on the computers, working in groups and talking about it. I liked working on the computers because it was faster. I liked working in groups because you have help.
1) Working together (communicating) 2) Being independent 3) Investigating (trying to figure the problems out)
It was kind of fun to figure out how stuff occurred. It was fun working together, I learned how to do an investigation.
1) I liked the computers, I like computers 2) I liked the groups, I like groups 3) I liked the Friday part. I was ready to go home.
1) I liked using the website 2) I liked using the rubber cube. 3) I liked using the Biological Box. All three things were interactive.
1) working on the computer, I like computer 2) working with the cubes, I like figuring things out.
I liked the investigations because I liked thinking like that. I also liked working on the computer at one point because it made it much easier.
I liked going on the computers and reading the letters and I thought that the mystery box was okay. I liked asking the testable questions.
1) I liked that I could work with people 2) I liked that we used the computer, that made it more interesting. 3) I liked the biology box because it was fun making questions about what could be on the bottom.
The most was the website and I liked the mystery cube a lot. I liked lesson 3 the best, it was fun. These things taught me a lot.
It was very interesting to do the mystery cube. It was a little challenge but it was fun. I also liked conducting the scientific investigation and trying to use the information to figure out what happen. I liked using the lab tops.
I liked working in the group. I liked the mystery box and the website because it looked like a real health department. In lesson 3, it was easy to make up new questions and it was the funniest lesson.
I liked using the website the most. We didn't have a lot of

homework. It wasn't book work so it was a lot more fun than book work. I liked using the maps on the website also.
Overall, the three things was that we got to work with partners, we worked on the website and we got to look at real inf. I liked these things most because they made the Lessons more interesting.
The three things I liked most about the supplement was that I got to work with a group. I liked how we could go on the website. I also liked that we got to do the mystery cube and the biology box.
The most I liked about the supplement is when we all had to get on the computers as fast as we can and sign on to the website and do the specific lesson to collect all of the data. So we can fill out our worksheets so we can get a good grade. Another thing that I liked about these things are when we all had to work in a group to all of the data.
I liked working in a group with friends. The work in class was fun and we got to work on computers.
I liked that I got to have a partner. I liked how we got to go on the computer. I liked how we analyzed our data and the answer. I liked that we got to share information with other groups which made it a lot easier and I liked that it was easy to read and comprehend it or all the lessons that we did.
I liked guessing, finding evidence and looking for clues.
I liked when we started to do the investigation. I liked the homework. I also liked the fact of working with a partner. I liked answering the 2 questions. I liked going on the computers. It was fun and interesting. I liked getting the information.
Three things I liked about the supplement is that I got to work with my best friend. I liked going on the computer because it was like I was a real scientist. I also liked the biology box. I liked trying to figure out what was on the bottom of the box.
The three things that I liked is; it challenge my mind. I liked going on the computer, also working with the group, meaning my friend, Heather. I liked this because you can't just write down anything and it was just fun.
I liked working in groups. I like the two first lesson that we did because it was fun trying to figure out what was missing.
1) I like how the teacher's didn't tell us the answers until the end. 2) I like doing the hands on groups. 3) I also thought all the lessons were interesting.
1) The computers 2) The lessons 3) The mystery
1) I liked how most of it was challenging because I liked challenging work. 2) I liked how we got to use the computers because I like computers. 3) I like how much writing was involved.
1) I liked to go on the computer to find out all of the answers 2) I liked how we had something different everyday. 3) I also loved how we got to work together through everything.
I liked trying to find out the answer to the questions. Also, I liked getting all the information to get the answer.
I liked using the computers for the sickness investigation. I liked trying to figure out what was on the biology box.
I thought working in groups was cool. When we were working on the lap tops that was fun. I thought it was cool when we didn't have a lot of work. Trying to figure out the mystery cube was fun.
What I liked most about was we didn't have lots of

homework. I also liked that we could work in groups. I also liked that it always left us guessing what was the answer.
I liked most was working in groups, the biology box and more these lessons taught me a lot that I didn't know. The Biology box was the best because it was very thinkable and you had to do stuff carefully with the box and I liked that.
1) I really liked working with a group and working with computers. 2) I liked trying to solve this mystery 3) Overall, it was the finest thing we did so far.
1) I liked working on the computers 2) The Biology box was fun and got me to think about science. 3) I also liked being in groups.
1) We had computers 2) We were in groups 3) It was fun.
1) I liked the Biological Box 2) I liked working in groups 3) I liked the way they had you do the stuff like for the one with the sick kids and how you used the computer.
1) I like how we had to solve what was on the bottom but didn't find out until the last day because it kept you thinking. 2) I also liked how we got to go on the computers because we don't really ever go on. 3) I liked how we had to use our brains because I liked to work hard.
The things I liked most was that the website was very cool. The mystery cube was not because of all of the sides equaled to seven and it was really cool to go on the computer everyday.
The first thing I liked about it all was that it was easy. The second thing I liked about it was that it's fun. The third thing I liked about it was it made me think about what all the scientist have to do.
1) I liked that the biology box was hands on. 2) I liked that we had to solve a mystery using somewhat physical evidence. 3) I liked working in groups w/friends and I enjoyed using the computers.
Well, I like the Mystery cube, Biology Box and Scientific investigation because it really gave me time to think on new questions and think of an explanation and good examples.
I liked the cube, the box and the investigation. They were very puzzling but not difficult. I like brain teasers and mind games. So these were fun for me.
Three things I liked most about the supplement are; we were able to work in groups. I think working in groups are better than working alone. You get more information when you work in groups. I liked the mystery cube, we also got to work in groups. I liked that we got down to the final 3 places where the sickness could have come from.
The three things I liked most was the cubes, the investigation and the end. The mystery cube and biology box were great ways to start off the lesson. The investigation itself got me asking questions almost all of the time. The way it ended had me surprised and I wanted to do more.
I liked the sickness thing. I liked it because it was a mystery but it was fun.
The three things that I liked were the investigation, the mystery cube and the biology cube because they all made me think about different possibilities. The fourth thing I liked was working in groups.
Three things I liked most overall was working in groups. We usually don't get to work in groups and I really enjoy working with others. Also, I liked being a detective with thee trying to figure out what was the illness. I liked working on the computer, I thought it made it easier.
I liked getting to work on lap tops because I usually do all

my computer work on a desktop. I also liked the biology box because I got a good understanding of testable questions. I liked making observations of the investigation.
What I liked most about the supplement was lesson one because it got me thinking and it was fun to work with the cubes and day two of lesson 3. I also liked day 3 of lesson 3. I liked working in groups because you get different opinions and using the website.
I liked on the cubes that I didn't get to know the answer. I liked working in groups. I like get new questions.
I liked doing the projects because they were fun. They were easy to understand and read because it was very clear to me. The website for the sickness was very easy to navigate.
I didn't really like this activity because I didn't like doing al the work but I liked knowing what the answer was ahead of time.
I liked that we could use the computers and get info on graphs to try to solve it. Also, most of it was easy enough to do solo without partners. Last I liked only one the most.
The three things I liked most were; the three day activity on the sickness mystery. I liked that because we got to use the lab tops and got to work with partners.
I liked the first and the third day because it worked with numbers more than anything else. I enjoy working with numbers. I also enjoyed the biology box because it had more difficult patterns to find.
Overall, the three things that I liked were; the biology box, another thing was the mystery cube. Also, I liked when we got the memos.
The 3 things that I liked the most were; the mystery cube, because I liked coming up with questions with my group. Working with questions, because I like coming up with questions and then seeing if they are right. Finally, conducting a scientific experiment. I liked that one because I liked looking at the evidence.
The 3 things I liked most was the investigating, working with the other people and working on the computers. I liked those most because it was the most interesting thing out of all of it.
I liked the Biology box. Lesson 3 and Lesson 4. They all have good learning techniques in them and they all make us use our minds more than usual.
I liked the number box, science investigation and the mystery cube. I liked those three because they were kind of good and made me think.
I liked the 3 lessons in Lesson 3. It was fun and that we worked on the computers and that we wrote. Also, it was fun.
1) The mystery number cube were cool because it made your brain work hard and that you had to think very hard. 2) The animal cubes were awesome too, you had to think very hard. 3) The web page was my favorite because it lasted the longest and we got to use the computers.
1) I liked the mystery cube 2) I liked the biology box 3) I liked when we went on the computer
I liked the biology box all three activities and the mystery cube.
1) I liked that we never found out what was on the bottom of the biology box. 2) I liked the type of mystery that we had to solve 3) I liked how the website was so realistic and made you think it was real.
I liked the box activity, I liked the computers and I liked the cube activity.

I liked the biology box. I liked the mystery cube. I also liked the conducting a scientific investigation and everything.
I liked Biology box, liked the sickness mystery and putting everything together
I liked going on the computer because that is cool. I also liked working with a partner a little bit and liked the activity were we had to make testable questions.
I liked the Mystery cube. I liked the scientific investigation. I liked trying to get the answers using the computers.
I liked when we were on the computers, mystery cube and animal cube because it was boring and not interesting.
I liked the website of student absents
I really liked the website and all of the options and evidence because it really got me thinking. It made me want to know more and solve the investigation. I also really loved being able to use the computer for such a great investigation and lesson. I liked that you made the website so interesting and real.
I liked the realism computer work. I liked the work we did on the homework. I liked the end when we were able to check the end. I liked that you feel you were in a real investigation in that website.
The three things that I liked most about the supplement was; they mystery cube, the biological box and going on the computers looking at the information. They mystery cube and the biological box were challenging a little and fun. The computer was good because we got to see all the charts and everything else.
What I liked was you had to work together it had you always asking question and I also liked the mystery box, biology box and the unsolved absents.
I liked the biological box and using the computer and the mystery cube.
The three things I like most is; using the computer, I liked the mystery cube and wondering what happened to the kids.
I liked the activity of solving the absences of the two school. Also, I liked that we got to work with the other kids and hear other peoples thoughts. My other favorite part was the challenge of the absence activity and how interesting it was saving questions and making new ones.
The three things I liked most were; solving the puzzle of the kids being sick, working in groups and I liked the time we had.
Overall, the things that I liked the most bout the supplement was that we knew were they went and then I liked that we got to see who was sick and it was very smooth.
I liked that we worked in groups and that we got to be detectives. Also, we were mostly hands on with the activity.
I liked the biology box because you got to move it. I liked the number box too. Also, the lesson 3 was nice.
The three things I liked was; solving the sickness of the kids, figure out the food chain on the bottom of the box and figuring the number on the bottom of the cube.
My three things favorite things was the biology box, what is the cause and what is the source.
The three things I liked most about the supplement was the two boxes and the community investigation.
I liked the mystery cube activity. I liked solving the food chain. The investigation was a fun activity.
I liked solving the bottom of the mystery box. I really liked Lesson 3. Activities 1, 2 and 3 were very fun to do.

1) The internet 2) The mystery cube 3) The biological box.
I think the three things I liked most about the supplement are the three days of the children's absences. I liked those three days because it was the easiest.
I liked the website. I liked the biology box. I liked the whole Lesson 3.
The three things I liked most was the three days we got to get all the information and activities.
1) I really liked using the computer for the website information. 2) I liked working with other students in a group. 3) I liked trying to figure out the mystery of why the students were sick.
1) the computer because it was better than writing 2) solving the bottom of the box? 3) and the food chain
It was okay. I liked lesson 3. That lesson was fun. I like solving crimes. I liked looking at the different graphs.
1) The first thing I liked is having to work with a partner and getting information from him. 2) I liked solving what was on the bottom of the box.
I liked the computer and what was wrong. I also liked the most is the mystery. I also liked the biological box.
1) I liked being able to look at the maps of what the kids did and where they went. 2) I liked the boxes and trying to figure out what's on the bottom. 3) I liked using the computers.
1) I liked were the unit started with the question "Is There anything as a dumb question"? 2) I liked the way we did the survey questions over at the end. Made me think more. 3) I liked the cube worksheet, it was interesting.
We didn't have to do much research. It was cool that this was a real issue. I like to act out being a kind of detective.
I liked working in the computer lab with a partner because I am good with computers and two minds are better than one. I also liked activity three because it was realistic and could happen in real life. I think that the cube activity was fun because it made me think about stuff I have never really thought about. The pattern was very well thought out.
I liked that we got to be like scientists and investigate the Health Department outbreak. Also, I liked the group work in the computer. I liked to figure out what was on the bottom of the cubes.
What I liked most was the health department thing with the two middle schools, the cube activities and learning about testable questions.
The cube activity, the computer and the bring it all together. The reason why is because it was fun.
I liked taking the first 3 surveys.
It was sort of interesting to come up with my own conclusions about investigations rather than being handed the answers. I liked getting on the computer for the 3rd investigation.
I liked the cube game activity, the investigation and some of the homework.
I liked using the computers and websites, having the whole story and the way the report forms were set up.
Learning what the disease was, reading why students were absent and estimating what was on the bottom of the cube.
I liked looking at the cubes and guessing about them. I liked going on the computer. I liked doing investigations.
The thing I liked the most was when we got to take the true / false questions and using the mystery cubes.
I liked that it was not too hard except for lesson 2.
I liked the cubes, the computer labs and testable questions.

I liked being in the computer lab while on the internet. I really liked having the cube experiment. Also, I liked learning how to rewrite a testable question.
I liked how our group got to talk a lot and we had to keep asking questions and last getting to find out if we were right.
The three things I appreciated about the lessons were; the computer lab activity, sharing our perspective in class and the cube activity. I am hands on kind of person and I am always ready to share my ideas. I loved navigating the site and questioning my and others ideas.
I liked figuring out what was the problems. I liked working with partners. I liked looking at all the data.
fairly fun
What was on the bottom of the cube. Coming to a conclusion as to what the sickness was and working with partners.
I like that we got to do things on our own. We got to go on the internet and search for things. I also like that we got to search about what we thought we should.
One, we got to look up things that I did not even know they existed.
I liked that it tried to make you think, but other than that I didn't really like it.
I really liked try to find out stuff and inf. I liked trying to find out what was on the other side of the cube. I liked trying to find out why the people were absent.
Well, I liked the computer because that made it a little more interesting. At the cube was fun as well. I guess doing this tell you about it.
Overall, I liked the cube activity the most because it wasted class time on extremely easy stuff. This gave us more time to do other things such as socialize or play games or do homework. Also, we could talk in class without getting in trouble.
1) it was easy 2) you could understand it 3) the questions made me think
1) getting to try to see what was at the bottom of the cube 2) going on the internet 3) investigating
I liked the interviews of the parents. It really stretched my mind of what I'm capable of. It was fun.
1) I liked how we were acting like doctors! Because I kind of want to be a doctor when I grow up 2) I liked the whole activity because it was exciting & fun 3) I liked the little emails because they helped a lot.
The use of the computer
It wasn't boring. It was sometimes strange. I like strange things. It also kept my attention because it wasn't too easy and it wasn't too challenging.
1) it was a little bit fun. 2) I learned a lot 3) It made sense.
I liked it, it was fun, and it wasn't too hard or too easy.
Wasn't much work, nice pictures on the box, and gave you all the answers on the website so you didn't have to work very much
search the internet, figuring out the disease and looking pictures
I think I liked the first cube lesson because it was interesting.
it made it fun, they were easy and it let us use skill. The activity helped us in investigation. It had made us think of all kinds of questions.
The three things I liked most about the supplement was searching on the internet, the number cube activity and the animal cube activity.

Working on computer, collecting data, and working with a group
I liked doing all of the projects and my teacher made it fun. I also think that doing the cube activity was fun.
Well, for the two lessons I did, I would say; 1) Finding out the answer/solution to the problem 2) working till the end. 3) Learning something new
I liked how people skipped classes because they were sick. I was surprise how many people that skipped band. I liked when people had the flu and the school asked use to help.
I enjoyed the research, and finding out what the illness was and how it started.
I liked the most is we work in group, I like that.
I liked that it involved physical things; like the cubes and computer lab. That is more fun than just reading and writing.
There was a lot of hands on activities, I enjoyed the mystery cubes, and it wasn't too hard.
1) I liked the Health department lesson because it was fun to be a detective 2) I also liked how we got to think of new questions 3) I learned more about what a testable question is.
I thought it was easy, I thought it was helping me learn
The website, cube activity and I learned more
That we had to research for clues. We try to figure out something & learn that we are capable of it. That we work as a group & individually also
The things we had to do because it was fun and interesting. The research because it kept me busy and the clues we got.
I liked how we had to figure things out on our own as students. I liked how each section was worked on at a time. I liked working with my classmates.
1) The mystery I like to not know 2) The computer work I also like to use the computer 3) Working with a partner, I sometimes have trouble and it is nice to ask a student for help.
1) We got to work in groups (sometimes) 2) We got to work on computers 3) We got to conduct experiments
I liked the cubes the most because we got to work in groups and got to find out what was under. That was all I really liked.
The website was cool, it had graphs, maps, calendar's, like it was real. The experiment on the cubes was fun it made us think.
It was different, learned some stuff and got to use a computer
Easy, worked in groups, and wasn't much work.
I liked going on the website because it made me feel like I was a part of the investigation. I liked the cube exercise because it made me think of things.
Figuring all of it out, thinking for myself & discussing with a partner and what I learned on the investigation
Going online, working in groups, discussing ideas.
Lesson 2, because the activities weren't that interesting, the student knowledge survey, and the health dep. Investigative report form because it didn't really help us in anyway.
Using computers, finding answers to questions and studying info to find answers.
The website - it was fun, Team work - It's character building and Mirror Usage - I think mirrors are fun.
The magic cube, we had to use common sense. I also liked the health issues.

The supplement made us think it wasn't just book work and it wasn't just activity. Plus not having homework.
Most of it was simple; I like simple / non confusing things. I liked filling out surveys and I like the box activity because you had to find an alternate way to look at the bottom.
I liked the posters, charts, and pictures on the computer and what we did in class.
1) The activities, because they were fun. 2) That it was new, because it let us experience a new project.
I liked the first activity. I liked the mystery of what happened & what's on the bottom. I liked the activities.
I liked the internet site cause it was easy to get around. The box was cool because we had to guess. Looking at questions was fun because we worked together.
The theme, the interviews and the creative memos
I liked trying to figure out the problems, searching the website and finding new ways to do things.
A lot of info in lesson 2 & 3. The helpful charts and graphs. Getting to be a health inspector.
We got to work together on computers. It included using logical reasoning to find out the answers. It was easy but still challenging & fun.
The activities, Lesson 1 and Lesson 2
I liked how student's could actually participate in each of the activities. Also, the level was appropriate, I enjoyed the website.
1) The website was better than just reading off a paper. 2) The activities were more appealing than reading out of a textbook. 3) It wasn't something I lost any sleep over. We did it all in class.
1) I liked how they made interesting activities, it made it more fun to do. 2) I liked how all the activities made you think more out of the box, it made thinking a little more fun. 3) The lessons were right at my skill level.
It was semi-interesting. It gave us something to do. The investigation gave us a chance to use our critical thinking skills.
Using formulas and completing tasks like real scientists. Being an investigator for the health department. I liked trying to solve all of the problems.
Most of it was fun because it was interesting.
1) we used computers 2) the cubes 3) made me think
The computer lesson was the best.
Trying to figure out what made the kids sick. Discussing questions about the box (1). Making the questions into one that could be answered (2)
I liked being the health inspector the best. It gave me a role to play and made me pull my resources together to come up with a conclusion. I also liked the mystery cube. It made me cooperate with my peers. I also like the ending of the health inspector. I believe that I evaluated all of my sources thoroughly.
Using computer because it's much more interesting.
I enjoyed how the internet site was set up. I enjoyed how the scientific questions were answered. I enjoyed learning about testable question.
1) Worked with a group 2) Made you wonder 3) Had everyone work on the questions.
It was easy. It wasn't too easy.
It was interesting. It was a different way to do things. It used a website that had all the information on it.
I do not know, I was gone for most of it.
I liked asking questions, the hands on activities and the website. I liked asking questions because it got me to

think. I liked the hands on activities because it made the experiments interesting and the same with the website.
I could tell there was an effort to try and make it as interesting as possible.
It was challenging, we got computers and it's tricky.
1) Made me think harder about some questions about Earth. 2) I really liked the square activity because it involved teamwork among a group. 3) Now I know how to ask a testable question
It made us think about new things, this helped us open up a new area of interest in our brains.
It was fun to research things and try to figure the results.
The pictures, the letters and the hands on experiments.
It was relatively easy. It was more like an actual investigative process.
I liked how they mystery cube didn't have an answer because it taught us that some questions don't have answers. I liked the some of the lessons were we had our investigation because it seemed real.
Collecting data, websites, and making questions.
The boxes, they were fun to guess on. Using computer, I like to use them. Reading data, I like looking at graphs and maps.
I liked getting onto the website and trying to figure out the answer. It was the most fun and interesting. I like hands on activities.
I liked that we got to do things ourselves and we weren't doing book work. I also enjoyed class discussions.
We got out of doing school work.
1) Computers 2) Box thing 3) Questions
I liked that the material was easy to understand. I liked how the lessons were arranged.
I liked lesson # 1 and how it taught you to come up with spontaneous ideas. I really liked working on the website and the freedom it allowed. The connection made in lesson 4 of the investigation and scientific inquiry was cool.
The boxes, they were fun
I really didn't like it. It was a little too immature.
I liked going through the sites and answering the questions. I like that it made you think.
It was fun to work with groups. I liked the actual lessons and good information.
Working in groups to find an answer. Using the computers. Investigating the health problem.
The investigation, it made me think.
The Jackson Middle Case was a mystery and it was more interesting than the rest.
Figuring out the bottom, making the questions and surfing the web.
Using the computers. I don't know what else.
It taught me about testable questions. It helped me use skills of investigation. It didn't leave anything out.
Wasn't book work. Got to use computers. The restaurant names in the maps for Truman M.S. were hilarious.
Working on the internet, the overall craziness of the project, figuring out the mystery.
Everything
Nothing, the whole thing was ok.
It was a change from what we were used to which is normally book work. I don't like book work as much. We were able to work with partners sometimes. I like group work. It was enjoyable because everything was a different activity.

It worked your mind it was interesting. It was better than book work.
We got to investigate and dig deeper. We could ask new questions and we could have fun while doing it.
I liked that these were hands on because that made it fun. I liked that these were scientific because I love Science. I liked that these were logic puzzles because logic puzzles are fun.
I liked Lesson 3, because it was fun.
1) Teamwork-if you had a question you could ask a friend 2) Fun activity-it made it fun to learn 3) How hard it was-it challenged me.
On Lesson 1, I liked not knowing what was on the cube. I liked being able to work with groups. I liked the experiments that we did.
Most of the work was "hands on", not reading. I liked how we went to a website. I liked how we could respond to what we thought of the projects and work.
No books, groups
1) The part on the internet because I like using computers because in a way it's more fun than just looking at some papers or a text book. 2) The part were we had to find out what was on the bottom of the cubes, because we had to use logic and I just found it fun. 3) Rewriting questions and trying to make them testable questions because at first we weren't sure what would and wouldn't be a testable question and when we found out, it really made us think.
1) Observing-it really made me think 2) investigating 3) all online
1) I liked it when we got to go on the web, sort of. 2) The cubes were kind of interesting, I liked that 3) Can't think of a third
The box because they had great pictures. Getting online to get info because it was fun. The testable questions because they were fun to try and make testable.
Investigating, visuals, creating own questions.
The cube, investigation and the animal worksheet
No book work, groups and difficulty
I liked having to think & some health stuff because it's interesting.
Supplement?
I liked the box activity because it was fun, the making your own questions sheet was more challenging and I like that, I also liked getting to use the computers on the 3rd part, because it was fun and challenging at the same time.
Learning about testable questions. Important scientific skill.
I liked the investigation because I felt like a real scientist.
1) It was interactive 2) It was fun 3) Nobody really told us exactly what to do
1) It was fun 2) I learned a lot 3) Most of it was interesting
Had generally good follow up, Presentation and Constant learning material (In theory)
All lessons were very interesting and new.
The first thing I liked was that most of the things were fun and interesting. The second thing I liked was figuring out for ourselves most of the info. The third thing was doing what we could with the tools provided.
Some of it was hands on, it made me think and it was not too easy
It was different than what I'm used to, made me think, and most of it was well put together.
1) They taught me how to write a testable question. 2)

That we were detectives to that we were trying to find the cause of an illness at Truman Middle School. 3) Working in groups. It's more fun when you work in groups & you have someone else's opinion.
1) it was hands on activities, and I liked that, it gave us a feel for the world beyond writing on a board. 2) It was interesting. 3) It showed me a whole new view of science.
1) The different questions because it made me think the hardest. 2) The biological box because people had such a way to find out what was on the bottom. 3) I liked coming up with the testable questions for the questions " Do bugs have blood".
I liked the letters to the editor, because it made us think about what testable questions are, and how to come up with them. I liked the mystery cube, because it made us find patterns, and I liked the health department investigation, because it made us look for clues, and open our minds to all of the possibilities.
1) letters to the editor 2) activity on computers 3) biological box
1) Class discussions - It was nice to hear everyone else's opinion. (we normally have discussions in class anyway). 2) The website - it was easier than a jumble of papers. 3) Changing not testable questions to testable questions - it was fun because I learned more about testable questions.
I liked coming up with a conclusion as to why the students of Truman were missing large quantities of school. I liked creating testable questions for the cube and question activities. I liked researching to find a conclusions for the absences at Truman.
1) The biological box was really fun because it was not too easy and not too hard. 2) Conducting a scientific investigation was fun it was a little easy. 3) The letters from the editor were fun because of their topics.
I enjoyed every part of this curriculum except for that some of it was too easy. Otherwise, it was fun and I enjoyed it.
1) The biological box was cool; showed scientific inquiry. 2) The investigations on the website, helped us gather evidence. 3) The letters to the editors helped us create testable questions.
I liked most about the supplement is that we got off our usual note-taking routine. Second, I liked the experiment because it included a lot of team work and clue gathering.
Listening to other's theories, getting to explore info and collect data for explanations and asking testable questions.
The cube activity, the realistic & the experience of seeing what a scientists do.
The big thing is that it made us think about how to gather evidence, how to work as teams, and how to ask testable questions.
1) I liked the website activity because it let us do things without exact directions. 2) I liked the biological box activity because it made us think about what a testable question is. 3) I liked the "working with questions" activity because we had to think a lot about a better testable question.
These lessons were very interesting <u>while</u> they provided knowledge about doing science. These lessons taught me quite a bit.
1) Conducting a scientific investigation because it wasn't all discussion and worksheets. 2) Doing the experiment for the Biological Box because it was a good change from observations. 3) Discussing the investigation with the class because it was interesting to hear other theories.
I liked how we had to gather evidence because real scientist do that. I liked the "mystery" atmosphere of the "Conducting a scientific investigation" activity because it made it more interesting and worthwhile. I liked the letters to the editor sheet because you had to make testable questions which are fun to make!
Using computers because it is more interactive. Thinking of scientific questions because it made you wonder more. Doing experiments because they are interactive.
I liked how it made you think about new things that could be possible. I liked that it was really easy. I liked being able to look at data.
Website made it fun, Intro interesting, and letters made it fun.
Mystery boxes inquiry, interesting. Investigations mystery, finding clues and using tools in bottom of hidden geographic box.
Website more freedom, using tools w/ biological box was hands on, and creating testable questions, lesson 3 open ended.
Working on computers, pretending to be Health Dept. workers and solving the problem and investigating using scientific procedure.
It was a very interesting way of teaching and it intrigued me. It wasn't boring at all.
I liked Lesson 2 because it helped me learn to think more basic in the first steps of scientific inquiry. I also liked Lesson 3 just because it was really fun to investigate it. I liked Lesson 4 because it helped me to understand Lesson 3 more.
1) I liked the website project a lot because it was interesting to go on the internet. 2) I liked trying to figure out what was on the bottom of the boxes, because it was fun to try to figure out what was on the bottom using "tools". 3) I liked discussing whether the question "there is no dumb question" was a testable question because you go to argue about it educationally.
Learning the difference between evidence and a conclusion. The final lesson because I could look back and pull together what I had learned. I liked the part of the lesson on the computer where we looked at the Cheap Chicken that and lake.
Very interesting, fresh ideas and nice website!
We got together with the groups, it made it more fun. We got to investigation different problems, it was cool looking at all the memos and letters.
1) I liked how we learned to be more observant because now in the future I'll be able to collect more information about things than I normally would. 2) Because the lessons taught as how to develop intelligent questions based on evidence, I liked the fact that now I can question and learn so I will come close to the answer. 3) I liked how we learned to use our questions and our information to reach a conclusion because it'll help me reach the end faster.
The health investigation & the study of the band class. Trying to figure out what was under the box. The fact that we got to get in groups.
I liked working in groups and I liked most of the activities.
Everything
The 3 things were parent interviews, calendars, and map about where people went.
That we became investigators. We learned the steps at what real investigators do.
What I like most about this was working with questions

because it was kind of fun.
I liked learning about reasons for the absences. I liked the map lesson. I also liked the cube activity.
The three things I like the most about the supplement is cube activity, the question, and pretend to be a health inspector.
Finding the evidence, observation from the data, and the data.
I liked discussing our findings, and finding clues and coming up with conclusions because all these things made us think.
Using tools to answer questions, finding evidence, and the questions made me think.
How we used our brains to figure out an answer to something we used evidence and even tools.
I liked the cube activity. I liked the interactions we had. I liked experimenting our answers.
I liked everything, it was fun.
Nothing, because it was not interesting and it was not something I would relate to and want to know about.
I like questions looking up evidence.
The experiments, the questions, and the groups.
I liked the box activities because it was pretty easy. I liked answering the question because it was fun.
I liked working with the cubes because it seemed fun finding what was missing. Working together and having partners help you. The last activity was fun.
Finding evidence about the objects.
Trying to find new things and learn new things to.
Working with the cubes to investigate and find what was on the bottom. Working together to read and look for evidence in graphs, maps, etc. Looking for the surprising conclusion.
They were interesting, some were fun, and I learned something
I enjoyed the cube activity. I liked hearing peoples ideas.
Computers, boxes, and inquiry things
Using the website. Using the cubes. Trying to figure out how it all fit together….because it was fun to look at visuals and how it made us question the material in front of us.
The website in Lesson 3 because it was easy and fun. The cube lesson because it was funny when people kept on turning it over.
We worked in groups, the whole thing of playing that are trying to find out something.
The biological cubes because we got to think real hard on questions about it. Lesson 3 because I go to play Mr. Detective. Lesson 4 because we solved the investigation.
I enjoyed the cube activity. I liked sharing my thoughts and ideas. It was very interesting to do.
I like the whole box activity with both of the boxes because it was pretty interesting. I also liked when we went on the website because it made the lesson a little more exciting.
I liked everything about every lesson. Everything was very interesting.
Working with the group because it made me understand everything. Working with the computers and discussing the answers with the class.
looking at the cubes, using computers, and looking at all those charts.
I liked that some were a challenge but others weren't. I like working with the computer. I also liked acting like a detective.
I liked the website, finding the answer, and the cube.

I liked using the maps, the box activity, and making questions for Lesson 2
When we went downstairs to the computers and how we searched webs. Figuring out the cubes. Figuring out questions.
The supplement wasn't really interesting. I really didn't like much of it. The supplement was just fine.
The website, the experiments, and the group work.
I did not like it at all
I like reading and use the computers to find out where the student went
1) I liked how we had to use technology around us ourselves, and our friends to answer questions. This made it challenging in a good way, I learned a lot. 2) I liked how when we had questions, there wasn't always an answer. This teachers me that not all problems have solutions, so we did to keep asking. 3) I liked challenging myself to think harder & ask questions.
The scales on how it was to us, the chart where we picked the number on we agreed or not plus when I was asked what I liked most.
1) The box project (because we got in groups and made observations about what we saw) 2) The questions (because we thought of questions we could investigate) 3) Truman School (because we had fun going to the computers and reading information about the students and their symptoms and reasons of absences.
The three things that I liked most about the supplement would be the cube, the internet usage, and just all the group work we did throughout this unit.
I liked the investigation, the cubes, and the website because they were fun and I really learned a lot from them.
1) Working in groups because it is cool to interact with others. 2) Finding out why the absence took place because we got to investigate and figure out why. 3) Learning what caused the sicknesses.
I liked working in groups because we shared ideas. I liked sharing ideas because we learned from each other. We got to talk to each other because we learned from each other.
I liked investigating the sick people and what would be the cause.
I liked working in a group helping each other and just working together and finding out info like on the absence chart.
I got to talk in group and said what I thought but in a big group, I don't say that much.
Inquiring minds was really fun and easy.
I liked the Mystery cube thing, and about how many kids were absent in school.
The explanations and graphs because they were interesting. Only two things.
Asking questions, researching, and getting information.
The last three lessons because they were cool, fun and informative
I liked working with the cube and biological box, the questions, and putting all together.
The best part that I like was the cubes because I understand them better and the map helped us with the absences.
1) One thing I enjoyed was using technology to acknowledge ourselves about the habitats / animals on the box. 2) I liked when questions were answered about the dolphins, fingers, bug blood…ewww…!!! 3) I particularly

laughed at the lesson were we had to research it was oh so easy.
Easy, friends, and low homework
We were in groups and I got to hear other peoples ideas.
Discussions in class - express opinions, Working in groups - work cooperatively, using technology to solve stuff - made us think on how to use everyday stuff like pencils and rubber band to solve problems.
Looking at graphs, because it gave me a visual predicting what might have happened because we were able to express our thoughts. Talking in class because we got to know what others think.
Three things that I liked about the supplements were forming new questions, because it helped me to think more making observations, because it could help me with my skills, and recognizing patterns.
The graphs because I could read them easily. The biological cubes, see above. The health charts.
I liked reading the articles of what happened. 2) The questions that they gave us were interesting 3) Looking at the graphs.
When we all gathered evidence from pictures & charts.
1) doing questions on the 2 cubes 2) doing research on how light make some people sneeze 3) doing and looking on the absence graphs
The investigation, observation, and the cubes.
Sometime fun because of cubes and maps. Group work because got to know ideas. Papers were interesting.
graphs, pictures, questions (some) and the paragraph from the read stafy
Share new ideas because something that you don't understand your group can help you out. Share questions and talk about it.
They mystery, the topic, and the information given. Because, I really enjoyed it all. It was all fun and valuable.
1) When we threw rocks at Paris Hilton 2) When we took over the White House. 3) When we all got recruited into the mafia I made friends with Salvator and Tony Soprano.
I liked how the unit everybody kind of understand it. I also like how part of the unit took on challenge. I liked how the teacher got involved & helped us.
Analyzing info because I love to interpret certain situations. Looking at different aspects of questions because it made you think. Observing patterns - it made the unit more interesting. Looking at patterns determining what they meant & determining if they have anything to do with other evidence is basically what made the investigation.
1) I liked the questions cause they got interesting as you go along. 2) I like the object cause they were fun 3) All the maps and graphs, cause they were good help.
We had to come up with questions and find out something about that question. I liked it because I like doing experiments.
Putting it all together because I like to know where they went. Working with questions because I like to answer them. Conducting a scientific investigation because I like to investigate things.
Activities - They were fun. Being in groups - we all had good explanations and reasons.
It made us think. We had to work together. Was a break from normal science things
The cube, because we had to use our head. The material because it helped us to gather more info. Putting all the info together because we could figure out what made the

kids sick.
I liked the scientific inquiry we made, the explanations my teacher made and when we got to look at the calendars.
The three things are that tone first three of them because they were the easiest.
The student's parent's interviews, being in groups of classmates and the map.
It taught me how to use scientific inquiry. I got to be a P.I. for a change, it was actually fun.
I liked how they asked us about our opinions. I liked how the whole class was able to share info, with each other. I liked how they tested us with the mystery activity first.
The whole unit tested our minds and made us think about other things and other reasons for things.
The gathering information, scientific information, and the putting it all together.
The graphs - they helped solve the mystery, the map, and the letters
1) Using our skills 2) Figuring out information 3) Solving the "mystery" because it was intriguing.
I really liked the group work because it was more interesting.
I liked how people worked together because we got things done quicker.
1) I like the observing 2) I like the interviews 3) I like the calendars
1) The cubes because it was fun to guess what was on the bottom. 2) The parent's interview because it show why the students got sick. 3) The calendars when the schools met.
1) The mystery box - you had to figure the # 2) Health Department - it tells you the health 3) Absences graph - because it give info how many were absent.
Making surveys, making inquiry, and the mystery box
I like how we got to go through the evidence the teacher gave us to use as evidence / analysis and how we got to absorbed the cubes.
1) The cube because it got me started on everything. 2) The questions were fun because they were interesting questions. 3) The 3rd lesson was my favorite because we didn't know the answer to it, but we worked ourselves to find it.
Worked in groups, because it helped us get a better result. When we had to look at different evidence.
Groups doing the experiment
1) Investigating; because it made us think 2) Looking at maps; because it gave us more info 3) The people giving us clues; because it helped us more.
I liked the first lesson because it was fun, and because we got to discuss things with our pupils. I liked it because of all the funny questions. I liked it because it wasn't boring.
1) Thing was poking at information 2) Trying to figure it out with questions 3) Coming up with an answer
What I like most about the supplement was that it ask you if you agree with some things and if you didn't
I liked finding why the kids were absent. I liked how we had to find out why the kids were sick.
I liked the strategy and charts. They made the assignment more fun.
I liked the investigation with sick students because I got to see what it is like being a scientist. I also liked the cube thing because it was fun trying to figure out what was at the bottom. And last, I liked the questions, because they were interesting.
I like when we did the mystery boxes and to find out about

the absences.
The cubes, the investigation, and the pasta charts.
I liked the cube, cheep chicken hut, some worksheets
I had fun, it was just right to get, and I didn't have to read.
1) It thought about more scientific inquiries because this unit showed me how. 2) The information was easy to read. 3) The difficulty was pretty much just right.
The cubes because reminded me about dice. The calendars
1) I liked the order the whole assignment was presented to us. 2) I liked most of all questions 3) I liked finding out the answers.
I liked looking at all the maps and all the info that was given to us to see which children were absent when, where, and why?
To tell the truth, I really like every overall because it was a little too much.
I liked the using of the scientific method because it helped us understand more of what the real question is.
Guessing, experiments, and acting like a detective.
The bio box was fun, the graphs were easy to read.
I liked reading about what the kids that were absent, I liked the first lesson and the last one too.
The maps, the graphs, and doing the experiment.
1) The diagrams and graphs were cool. 2) Some of it was fun. 3) There's more than one answer.
1) It was fun 2) You had to work 3) It was exciting because you wanted to know what would happen next.

It was fun, I liked the work to figure it out. I liked how we tested the stuff without experiments.
1) I liked how we had to think about it. 2) I liked the lesson plans. 3) I liked learning about the new things.
Made us think, interesting, and the health problem.
The mystery cube, Health issue in Middle School, and looking at the graphs.
I liked that they made you think about new things, it was interesting, and most of it was fun.
It was easy to understand, the investigation were fun, they made you think instead of experiment. It was sort of interesting.
1) It was kind of fun 2) Some of them were challenging 3) It made me think
It was fun to put my mind to get test in observation for no one, the investigation for 3 & 4 absent and no. 2
1) It was sort of easy 2) It was sort of fun 3) It was challenging
Analyzing data tables. Finding conclusions from evidence.
A little interesting, not too hard, and thinking about new things.
I liked circling the numbers because it was a good thing. I liked all of these things.
Solving the Biological box, writing scientific questions, and solving the sickness.

Overall, what three things did you like least about the supplement and why?

SOME OF THE THINGS WERE CONFUSING BECAUSE YOU COULDN'T UNDERSTAND IT VERY WELL
IT WAS BORING
WRITING, COULD NOT TOUCH ANYTHING
NOT ABLE TO TOUCH CUBE, SOME INFORMATION DID NOT HELP AT ALL HAVING THE SYMPTOMS OF TWO DIFF. SICKNESS
THERE WAS NO HOME BUTTONS ON THE INTERNET, THE ACTIVITY WAS TOO SLOW MOVING, THE ACTIVITY WAS TOO TIME CONSUMING
I HATED THE READING
NOTHING
The letters, because they did not help. Questions, because making them more specific is kinda weird. The website should have been more interesting.
I do not know
Nothing
The website was boring
Talking in front of the class, answering questions, hard questions, because I did not like them.
Writing, having to explain the evidence and asking question, it was time consuming.
I did not really dislike anything.

Lesson 2 was confusing. X nothing, X nothing
Not knowing all the answers, not having links on website and that we could not touch the boxes.
Was not able to get all the info.
1. The interviews were not working. 2. That there were too many schools. 3. That there were many pictures.
Everything, like for example, you never to know what the outbreak was.
Hard to understand the explanations could not touch the cube.
Not being able to see under the cube, using 3 partners instead of one, not using enough questions.
I disliked that it was too easy. It was not a challenge. I did not like that it took so long and finally, I did not like all the writing.
I did not like lesson 3 because it was hard to remember all the information.
Packet, testable questions, recording
It was a little easy
Confusing web pages, I did not like it much because I could not get the info.
1. Had to answer a bunch of questions. 2. Kinda hard to understand. 3. Semi-Hard
1) Going back and forth 2) Taking a long time 3)

Being too long on a page
Working with questions and did not get it at first.
Boring, Boring, Boring
Some were boring.
It did not give a specific answer on what happened. The "videos" did not give much information.
Boring stuff
1) That I had to do it because I don't like doing things like this. 2) It was not fun since it was not easy. 3) It is not what I like to do, I don't like Science.
The testable questions not being able to touch the cube because it was not fun.
1) It was a little easy for me. 2) Some of the lessons were dumb. 3) We need more time to do them.
Nothing
Overall, it was hard to understand some of the material.
Nothing
I liked all of it because it was all new and fun.
Too Easy
Nothing
I did not like the graph (activity graph) because it seemed a little confusing, there could have been more information. I also think they should have interviewed the students.
Nothing
Writing down new information
1) It took awhile to do 2) We need to share what we found out 3) Having to explain data
Some of it was boring
The writing, the confusion and what to write on the paper
I least liked making testable questionnaires.
All the questions because it took a long time and how much we had to write.
I did not like writing so much
Telling us the answer, waiting to start because I wanted to start writing.
That it had to do with Science
Not enough time, disruptive students, scientific questions.
Long! Lots of writing, not very well explained
The supplies, some of the questions, some of the lessons.
1) I did not like all the hard questions. 2) I did not like looking for the reall hard answers.
The writing, talking out loud and going to the computer lab; they were not my favorite things.
It was pretty basic - I already knew the scientific method.
It was not the best thing I would like to do for fun.
Lessons 1, 2 and 3, they were harder than the last lesson
1) Some lessons were not necessary 2) Some things were unrealistic 3) None
The maps, the last lesson and the school director

letters
Overall, I did not like the graphs on the website, the way how some information did not help us at all and they way we had to get re-tested.
You never found out what caused the absences. Everything else was fun.
The only thing I did not like was Lesson 4, because it wasn't very fun.
Lesson 4 and Lesson 2
No fun, real boring and not interesting.
I didn't like the biological box. I didn't like the mystery cube. I did not like the first lesson.
The three things I like least about it were it was plain, boring and too easy.
Lesson 2, writing so much and biological box were not fun.
Using the graphs of the schools, the bug blood and human blood thing, they rest was great.
Testable questions, thinking and writing.
Finding things, knowing what to put down, what caused it was it, if bend
I didn't like putting it together because we already had the info. The rest were okay.
Didn't understand testable questions. Some stuff was boring
The writing cramp. The confusion of the graphs, misleading
The questions only because they were boring.
1) some of it was boring 2) I didn't learn a lot 3) boring
Not being able to find out the answers, the website and how the tables and graphs were used because they did not catch my attention.
Back button
It was kind of boring
I did not like the boxes because the first one was obvious. Writing of what we found. The boxes were too easy.
What I didn't like was; the confusing charts, making testable questions and it was easy.
The tests
Having to be on the computer for 2 days was kind of boring and some of the info was hard to find.
Having to search because I don't like computers.
Testable questions
Writing about testable questions, not being able to touch the cubes and not getting the answer to the outbreak.
We had to write stuff down pretty fast.
Nothing, because it was so easy
Nothing, I liked it all
Putting it all together because it was review.
I didn't like rewriting things. I didn't like looking at charts. I didn't like the exam before and after the supplement.
Writing, boring
I didn't like doing a lot of the activities because they

were kind of boring.
1) Graphs you couldn't read 2) Not completely solving it 3) The testable questions
1) Some things were difficult 2) Sometimes it wasn't that interesting 3) Some of the reading was confusing.
Testable questions, because they were hard. Cube, because it was stuck to the plate
It had too much in it
Writing, I don't like to write
Nothing really because we didn't have a lot of homework
In some parts, it was hard.
Almost everything except for the internet activity because it was kind of boring.
Writing so much info. Having to remember a lot of info.
The cube part because it was frustrating.
Nothing really
Everything was fine.
1) The confusion of the website 2) That the website wasn't done 3) The graphs
Lack of info., the interest and it was hard. All those made this more difficult.
1) Not using more time on the overall supplement. 2) Only using our class as partners, could have used the whole grade. 3) I liked the rest.
1) It was a little hard 2) A little confusing and that's it.
Nothing
We never found enough info on activity 3 there was not enough info given out to figure out what it was. We never knew what the sickness was.
It was hard, not enough time.
The internet, the group and the whole thing.
Nothing
Sometimes boring
Nothing really
It was a bit unclear, at times.
The questions. It was hard.
1) I was confused a little because I was absent for the first day. 2) Need more info online 3) I needed a lot of help.
1) Too Long 2) Sometimes lead us in wrong 3) Kind hard to read the percentages and directions.
Sometimes if we sat really long, we could have gotten really bored.
Didn't get to learn the conclusion a little too easy, working in groups
I didn't like some of the information, the data table for sickness and that's basically it. I didn't like it because it didn't make sense a lot.
not much but it was boring half of the time
how confusing the web page was having disagreements with group it was hard
No answers
Above

1) It was kind of boring because it wasn't that interesting 2) It was too long of a project.
Kind of hard pulling everything together at the end.
Never got final answers got boring wasn't always interested
All the worksheets were meaningless!
1) That it was a medical problem 2) There wasn't enough info on the site 3) There was no right answer
It was boring It was hard
Everything except the cubes
The boxes, it was boring
1) Sometimes it was too easy 2) Sometimes it was too hard 3) Sometimes it was too long
It was a little hard. There is no answer. It had models.
I don't like to write too much and I like discussing things better.
1) not enough partners 2) not that much time
1) I didn't like that we never found out what caused the absence of the students 2) I didn't like that some info was way off 3) I also didn't like that there was a long period of time to spend.
1) Keeping track on data 2) Doing worksheets 3) Big projects
The second box, design of website and pulling it all together because they should have been designed better.
1) I didn't like my group 2) I didn't like the work 3) I didn't like how I needed to do the work.
It was kinda boring and pointless
1) At first, they were confusing 2) They never gave the answers. 3) (can't think of anything)
1) It was kinda boring 2) there was no answer 3) None of the project were really fun
None, because everything was fun and exciting
1) the whole story was confusing 2) the activity table made no since 3) too many sickness in a problem to deal with.
No real answers Kinda boring
I didn't like that I couldn't find all the answers to my questions.
My group they wouldn't work
1) I would have liked to have more resources to look at 2) More people in the group to compare suggestions 3) That's it!
There really wasn't anything
group, because of copying that is about it.
1) I didn't like the map they showed on the computer 2) Not knowing the true conclusion
some of it was boring & hard to understand
all of it, I don't know
1) Stuff 2) other stuff 3) other stuff
1) Too quick at parts 2) Too slow at some parts 3) Sometimes very confusing
1) not knowing the answers 2) not able to touch or

experiment
1) No answers 2) Not touching the box 3) Not getting all the information at once.
hard to get on computer
computers, their too slow
The one with no computer the website and the whole thing
work sheets because I don't like doing work sheets
1) It dragged on towards the end because there was too much experimenting. 2) I didn't like figure it out without more data 3) I didn't like looking at the thing online where it showed where kids went and who got sick because it was confusing.
1) group did not work well 2) boring 3) too easy
1) I didn't like that at the end of the experiment observation, we did not find out the real answer. 2) I didn't like also that it was a little too hard at some points but mostly easy. 3) I also didn't like was that it was too boring.
I didn't like it
1) Website didn't have the best information 2) Some questions were actually pretty hard to answer. 3) Our conclusion were not at all the same.
1) it was too hard 2) it was too easy 3) it took too long
Groups
It was kind of confusing! Some questions & the way they worded the sentences.
1) I couldn't understand data in general. 2) I was lost in making new "testable" questions. 3) Hard to think this supplement through why? Because I'm not real use to this, a lot was new to me.
Reading and Questions
1) Hard to get the material 2) Some things were too easy 3) Some information was complicated.
It wasn't that fun and wasn't as challenging
1) Length of Health Investigator Lesson - I didn't need that much time 2) Health Investigation was boring (after about the 1st sheet)
The format of the work sheet because I didn't get what to write.
having to write and that's about it
It was hard. The answers did not just come to me.
I didn't like that we did everything half way. We couldn't use al of the side.
They were boring, dull and easy!
It was boring, long and was not fun
It was long, it was so boring
Not knowing what was on the bottom for sure, because it made me mad that I could only guess. Didn't like coming up with more than 3 questions, because then I had to keep finding the answers. Having to look on the web, It was confusing.
1) It was too predictable, not like in real life 2) The same questions seemed to be asked very often 3) The website was a little bit difficult to navigate.
1) it was boring 2) you had to sit the whole time 3) we didn't have many resources

Website, hard to get on it
the explaining & waiting & analyzing evidence
1) some stuff was boring 2) some stuff was too easy 3) nothing was too challenging
1) the length of the lesson 2) the confusing information 3) Getting the last piece of info. which was really all we needed in the 1st place.
1) A lot of writing 2) That we had to look at more than 1 school (that took up time) 3) We had to do a lot of research.
1) Long 2) Easy 3) Topics weren't very fun
1) All the work 2) All the talking 3) All the reading graphs
Not that much
1) Recording 2) Recording 3) Recording
a little boring and too much writing
the stupid boxes they were really boring and pointless
Working in a group that is mainly it.
1) information was vague at times 2) difficulty went from easy to really hard with cubes (maybe there should be a cube in between) 3) there should've been more on the computer
Too much writing and worksheets and not enough time, because it was such a crush and it was tiring.
I thought it was alright, nothing bothered me about it.
1) They were hard 2) They were kind of boring 3) I had problems with the questions.
not enough supplement
1) Group working 2) Worksheets 3) The teaching
1) too little data 2) a little boring 3) hard to navigate website
1) Information, there was little 2) Website design, kind of confusing 3) Time factor, kind of rushed us
1) It took a long time 2) It was boring 3) It was mostly a review of what I already knew
The "Pulling it all together" activity, answering some questions and trying to find out if some questions are testable.
the questions lesson 2, boring the inquiry paper, slightly pointless
Nothing, the lessons and activities were alright .
Sometimes we didn't have enough time, the puzzled questions
1) sometimes it would be too confusing 2) it was too long 3) we needed more info
We had to write, I didn't like writing
I didn't like when all the kids got sick, when we had to write all the stuff, I hate when the internet messes up
There was nothing I really didn't like.
There really wasn't anything I didn't like.
1) We couldn't stand up 2) We had to share computers 3) We never got our last question answered on lesson 3.
Nothing was hard about the first one. The second one was hard. Nothing was wrong with the third lesson also.

There was not a lot of things I didn't like about these lessons. The only thing I really didn't like about the lesson is were we had to read a problem and we had make a testable question. The last thing I don't like about this lesson is when we had to find evidence as a testable question. I don't like these three because it made the lessons hard.
There was nothing I didn't like about the lesson.
1) Too much reading 2) Too much writing 3) Too many questions
Group work
I liked everything.
I disliked lesson 4, on lesson 1 not being able to get up and I disliked not being able to move the box.
I didn't like to write and read because I like to listen and watch.
1) When we had to do the boxes we couldn't move or look under them. 2) I couldn't understand some of the questions on the website. 3) Lesson 4 was hard.
I didn't have anything I didn't like because it was more fun than our normal work.
I did not like the writing, reading and making up questions.
The three things I didn't like about the whole unit was not able to touch, having to answer questions and having to read.
It was about health problems from another school. It was mainly an inside investigation. There were no experiments.
1) I didn't like making up testable questions on our own because it was boring. 2) I didn't like doing the worksheets because it didn't make any sense to me. 3) I didn't like this because I liked doing my other work such as textbooks.
1) I disliked the testable questions because we had to write. 2) I disliked the computer because we had to sit there. 3) I disliked nothing
Not for sure because I really didn't like everything.
1) That I had to write because I don't like writing. 2) That I had to think too hard, I don't like to think hard. 3) That we had to get done with everything in one day.
1) We had to write most of the time. I don't like to write. 2) Some of the lesson had too many words I didn't understand. I didn't like that. 3) Other than that it was okay.
I did not like parts of the computer lesson because it confused me. Also, I did not like the part with the cubes because I could not touch them. The last thing that I like was that I could not understand what they were talking about when I was on the computer.
I didn't like lesson 4 at all. I didn't like some of the computer work and I didn't like that on the mystery game we couldn't touch the cube.
1) I didn't like the Lesson 4 because it was confusing. 2) I didn't like all of the writing work because I don't like writing. 3) I didn't like all of the computer work because some of it was boring.

Some of the things were very confusing. I hated having to make up questions. Having things that were not necessary.
1) We had to think a lot. 2) We had to write everything. 3) We had to talk very quietly.
1) When I couldn't think about a testable question. 2) When I couldn't understand the question or statement that were asked.
1) I didn't like reading all the material because that is too much for my brain. 2) I didn't like having to choose a question to rewrite because it was not fun. 3) I didn't like having to wait to put it together cause I wanted to know right then.
1) I didn't like answering questions because some were hard to understand. 2) I didn't like working in groups because I could not concentrate. 3) I did not like doing some work sheets because some were incomprehensible.
Some did not show enough info and they did not give explanations. There were not enough personal talks with people for evidence.
The worksheet about pulling it all together really threw me off and confused me.
Overall, I like least about this is writing cause I hate to write, the theme of it and the work.
1) Besides the computer, it wasn't that exciting because of all the writing. 2) Writing everything down because it hurt after awhile. 3) Having to think too much cause I'm not that good at it.
1) It was sort of boring 2) Sometimes it was a little complicated. 3) It was not too interesting or fun.
I didn't like answering all of the questions. I also didn't like writing down all of the evidence. It got boring after awhile.
1) All the writing we had to do 2) Not understanding some things. 3) Not being able to do more research.
Too much writing took place.
1) Writing - I don't like writing 2) Partner - My partner had an attitude 3) Long work - I don't like long work.
1) I disliked Lesson 2 (Numbers 1 & 2 were nothing but questions) 2) I disliked Lesson 4 3) Some of the questions were hard (On number 3, I could not understand some of the questions.
Short questions, related, great information
1) writing, because I got tired of writing 2) having to think, because I don't like thinking. 3) answering questions, I don't like answering questions
I didn't like it when we couldn't solve each question because I found it interesting. Then, at one point I didn't like the group I was in. These two guys made it difficult. They were annoying.
Working with the partner I had, I wished I had a different partner. I didn't like to sit here and listen to talk all day.
1) I didn't like that we had homework 2) I didn't like that we had to write all our evidence on different sheets of paper. 3) I didn't like that there was a lot of

writing. I didn't like that I couldn't touch the mystery box.	1) I didn't understand some stuff 2) Didn't tell what was on bottom of box. 3) Class ended so soon.
I didn't like lesson 2 it was not a very good day. I didn't like the biological box.	1) I did not like not finding out the answers 2) I did not like how little work there was. 3) I did not like how little info they gave us.
One thing I didn't like about this was the homework. Also, I didn't like not knowing what was the answers to everything. One other thing, I didn't like was when we had to use the probe and ruler to see what was on the bottom of the box.	1) That we didn't get to see what the answers were on the computers and the cubes. 2) That we had to leave early and not get to do it until the next day. 3) That we had to do it almost by ourselves.
I didn't like to have to leave so soon. We didn't have enough time to look at all the stuff. I also didn't like the homework. I didn't like making up the questions for the homework.	I didn't like not finding out the answers to solve the problems. Also, I didn't like not knowing a lot of information on it at first.
We didn't have enough time in class on going to the website. There was too much information that was confusing.	I didn't like that we couldn't see what was at the bottom of the biology box. Also, having to do so much to find out the main source of the sickness and having groups when on the computers because not everyone could see it.
Overall, the three things that I like least about the lessons is that we had to analyze evidence. We had to make up testable questions and we had to put it all together. I liked these things least because they made this activity a little more boring.	I didn't like having homework. I didn't like that we didn't get to see what was on the bottom of the mystery cube. Some of the work was hard and I didn't like that.
What I liked least about the supplement was that we didn't get to see the bottom of the biology box or the mystery cube. I did not like this because I was interested in both the cube and the box.	1) We had homework 2) We didn't get the answers to anything 3) It was fun but hard.
Three things that I liked the least about are that some of the explanations & examples were a little hard to understand. Another thing that I do not like the least about is the way we had to be on task everyday, maybe one day we could have looked through the website and find out some more data. One other thing that I didn't like about these lessons is the...	What I liked least was it didn't tell us what was on the bottom of the box. Didn't like we had to leave so soon. Sometimes it was boring.
I did not like the homework at all. I think the class was too short and that the people need to eat healthier.	1) I didn't like how I didn't find out the answers to the mystery cube until maybe 2 weeks after. 2) I didn't like how I liked the lesson so much that the class had to end eventually. 3) I didn't like how…..
I didn't like that I had only a little bit of time to do the project. I didn't like that we had to do homework. I didn't like that we didn't get any of the answers to the lessons. The last thing I didn't like is that it was too easy, it should have been just a little bit harder.	1) I didn't find out what the answer were. 2) I wanted to do more of it or spend more time. 3) There was too much information.
I wouldn't know. I liked everything on the paper, I didn't want to leave so soon.	1) We had to leave when it was fun 2) I couldn't find the answer 3) They wouldn't tell us.
I didn't like not finding out the investigation. I didn't like the writing. I also didn't like taking notes of the information.	1) We didn't get to see what's on the bottom of the box. 2) Some days it's fun and you have to leave 3) The 1st box was boring.
I didn't like coming up with testable questions. I also didn't like writing all that information. The third thing that I didn't like was that I had to do homework.	1) I didn't like how they didn't tell us what was on the bottom of the boxes. 2) I didn't like how we had to make testable questions. 3) I didn't like the homework.
What I didn't like is how some kids did not take it seriously. Also, if they knew there was something wrong with the water why would they let them swim in it. Also, I didn't like doing the homework because I have a lot to do.	1) I liked the least that sometimes we had to leave and I was not finished. 2) I did not like having to wait to find the answers 3) I did not like.
1) I didn't like that I didn't find out the answer at the end of class. 2) I didn't like doing the third lesson.	The things I didn't like was that Ms. Craig taped the mystery cube to the bottom of a box. I also didn't like the biology box because you were able to see some thing. I also didn't like typing the website name in the computer.
1) I didn't like it when we got into the project then had to leave. 2) The information was kind of difficult. 3) I didn't like the sheet with loud music, Vitam C.	The first thing I liked least about this was that the box thing was stupid. The second thing was that the website never told us if the water was bad in that community. The third thing I didn't like was how they gave us the questions twice.
	1) I disliked lesson 2 because it was very poorly planned & conducted. (It was also very uninteresting, boring and dull). 2) I disliked the fact that we never

got the final verdict / answer to Lesson # 3 (what cause this mass sickness) ? 3) I truly believe that the ending could be better & more interesting.
I did not like doing what on the bottom from the Mystery Cube and what is the cause and what is the source from the scientific investigation. It was confusing and it had very scientific big words.
I didn't like to stop when they were becoming interesting. I also didn't like to leave the answer untold.
I didn't like that we couldn't find out where the actual sickness came from. I didn't like the Biology box because it wasn't easy to understand. I also didn't like that we had to do a worksheet at the end of Lesson 4 because we could of tried to find out where the sickness came from.
I didn't like the testable questions lesson. The lesson kind of bored me about how to ask good questions. In lesson 3, I thought activity 1 was kind of boring too because we weren't able to do much on that day. The only thing I didn't like about the end was we weren't given an answer to see if we solved the investigation or not.
I like trying to solve it. I like gathering information. I liked putting it all together.
The three things I did not like were the questions, the fact we did not get to find out the cause of the children being out and I did not like the fact that we did not conduct those last experiments. I did not like them because the questions were not easily understood and I wanted to know what the illness was. I also think we should have been able to conduct those experiments.
Three things I didn't like were that in the mystery & biological box, we couldn't see the bottom. Also, I didn't like that we had to switch classes and we just got into it. Also, I didn't like that we didn't find out the cause of the illness.
I didn't like not getting to find out the answer for the mystery cube or biology box because I like to find out whether or not I'm right or wrong. I didn't like having to pack up and go right away either. I didn't like not finding out what the cause for the sickness was either.
What I liked least about the supplement was you never really knew the cause of the absenteeism. I didn't like the lessons were all you did was write. It wasn't the easiest thing to understand, but it wasn't the hardest either. I just want to know why the kids got sick.
I didn't like that I didn't get to know the answer to the unusual absences. I didn't like not being able to touch the cubes. I didn't like having a time limit.
I didn't like not knowing what was on the bottom of the boxes and what was the source of the sickness. I didn't like working in groups. I didn't like doing some of the work.
The least thing I liked was reading the graphs. I don't like graphs cause I'm not too good at them.
The least was the last project leaves you hanging and some parts were hard and some parts were too easy.
The three things I didn't like were; the first two days and the last day. The boxes weren't any fun and the last day, it didn't tell us what had happened.
I didn't like the spread sheet. It was very small and hard to read the absence percentages. I also didn't like being left at the end without the answers. It would have been nice to know what happened. Finally, I didn't like the testable question worksheet because it lacked directions and was very confusing.
I didn't like that paper we had to do at the end of the investigation. Also, I didn't like when we didn't get to know what was on the bottom of the cubes and I didn't like the fact after investigating so much we didn't get to find out what had happened.
I didn't really like the biology box. I didn't like having to find the lion, zebra and grass. I also didn't like the putting it together because we didn't get to find out the results.
The 3 things I didn't like were; we wrote way too much, kind of boring and some of the stuff was hard to follow. That was what I liked least because when you need to write a lot and it's hard or boring you lose interest.
I liked the program except, the lesson 2. It was geared wrong. The time issue was a problem and I wish we got our own computers instead of having to share them. But working in the groups helped except the computer issue.
I didn't like the hard questions, hard to find things.
Three things I didn't like were; I hated stopping. I wish we could keep going. Also, I didn't like how it ended and know knowing what happened after.
1) Rushing with papers and website shutting down 2) Not having enough time. It would be great to do it all day. 3) Not finding out the answers.
1) I didn't like when we had to shut the computer down 2) When we couldn't find out what was on the bottom of the cube 3) When we couldn't find out why were the kids sick
What I didn't like is that I got so hooked. I wanted to finish it also.
1) I didn't like how so abruptly we had to leave the class. 2) I did not like how we could never solve it 3) I did not like how in the beginning we had to create testable questions.
I didn't like the testable questions. I also didn't like our homework with the essays. I didn't like that we had to shut down quickly.
I did not like not knowing what was on the bottom of the cube. I want to know what happened to the band kids.
I didn't like the part when we had to go early. I didn't like when we couldn't see what was on the bottom of the mystery cube and the biology box. We couldn't

find out what the kids got sick from.
That we had to go early. Why does the experiment not tell you that the Truman and Jackson schools got sick from?
The things I didn't like was; when we had to shut down and go when we were solving them.
I didn't like having to shut off the computer and leave the class. I didn't like not knowing what the kids got sick from.
I did not like anything at all but I don't like is Lesson 2 & Lesson 3 at all, but it was a lot of boring stuff.
I also liked pictures of Jackson students kids
I didn't like having a partner cause I could do it on my own. Also, I think that on the last investigation form, you should be able to work with a computer. I also hated that they didn't tell or give us enough information to solve the last investigation.
I did not like how the paper for homework. I did not like the activities like this one. I did not like we had to shut down so quick when you just get into it.
The three things I liked least about the supplement was; writing all the information, having to wait to see what's on the bottom of the cube and box, and that we don't know what sickness they have. My hand got really tired of writing all the information we had found. I didn't like waiting to see what's on the bottom of the cube and box. Also, that we still don't know what kind of sickness the kids had.
What I liked least was we did find out whether we were right or wrong and that we were rushed
I did not like Lesson 2, Lesson 3 and Lesson 4.
The things I dislike was not being able to use the computer, not being able to see the computer, not knowing what happened.
I didn't like that the cube activity was so easy. I thought it should have been a lot harder to solved to make it more interesting. I didn't like that we didn't get to see the bottom of the cube after we worked to find out.
I didn't like the fact we wrote so much, why they kids were sick?
The things I didn't like was that there was al to of reading and most of it was all words. There should be more charts.
I didn't like that we had to do a lot of writing, my partner hogged the computer and that we didn't find out end.
I didn't like Activity 1 and activity 2 in lesson 2 also lesson 4.
The three things I liked least was; answering the questions, only having a short period of time and not knowing why kids were sick.
The things I liked least is the mystery cube, lesson 2 and lesson 4.
What I liked least about the supplement was that we had to work with partners. I had to write more than usual and it was too long.
I didn't like writing. The question day was a little frustrating. I didn't like how we had to leave the class if we weren't done.
I didn't like the writing. The lesson 3 maps were confusing. I didn't like how when class was over we had to stop the activities.
1) The part were we had to go to another part. 2) The writing 3) Not knowing what number was on the bottom of the mystery cube.
I didn't like the worksheets.
I least liked Lesson 2 and I didn't like the mystery cube. I didn't like writing so much in Lesson 4.
What I liked least about everything was that we didn't find out what the sickness was and the cause. Also, that we had to keep starting and stopping.
1) The maps were somewhat confusing. 2) I didn't like the testable questions.
1) the writing 2) and we had to leave in a certain amount of time 3) we did not know the answer.
Partners, lesson 4 and lesson 2
1) I didn't like that we did not get to see what was on the bottom of the box. 2) I didn't like reading. 3) I didn't like writing on any that I did.
I did not like working with question. I also did not like the writing and I didn't like why they didn't tell us what caused the sickness.
1) I didn't like working with a partner. 2) I don't like the worksheets.
1) I didn't like how we didn't get to see under the cubes. It would be better to show how to make an observation. 2) I didn't like how we didn't know what the disease was. Change the way we investigate if we knew ahead. 3) The testable questions.
There was too much suspense. We didn't know what was on the bottom of the cube. We didn't know what the illness was.
I didn't like the survey in activity one and activity four because it wasn't really detailed and hard to follow. I also didn't like when I had to develop new testable questions because you had to go step by step (you couldn't work ahead). I didn't like the part where you had to guess stuff because it was hard.
I didn't like that no one told us what was on the bottom of the cube. I didn't like all the surveys.
I really wasn't fond of answering the questions and filling out this packet because I'm not fond of writing.
All the other things that I didn't mention. The reason is that they were not fun.
I didn't like not seeing the bottom of the first cube, lesson 2 was hard and taking lesson 4 survey.
The supplement in general was sort of boring. The topics were very interesting.
Lesson 4 question sheet, cube homework and writing a lot.
I didn't like the True / False survey and writing so many testable questions.
reading the data of why they were absent, writing testable questions for the data and filling out

evidence paper.
I don't like writing a lot. I didn't like how we only got to look at one of the cubes. I don't like thinking a lot.
The thing I liked least was when we had to do the computer work.
I did not like Lesson 2
I didn't like not knowing what was on the cubes, not knowing what disease the band people had and thinking of testable questions.
Lesson 3: The website was not set up real well Lesson 2: there was not real (hands on) experiments Lesson 4: there was too much talking
I didn't like how some people cheated. I didn't like how others tried to listen to other groups and how they only they were right.
A lot of the lessons were common sense, they did not cause me to think outside the box. The lessons were extremely easy. I wish it was a little harder.
I didn't like figuring out testable questions. I didn't like that we had to think a lot. I didn't like that we didn't get to figure out who started the problem.
Some were boring.
The worksheets, not having enough information and not being able to see what was on the bottom of the cube.
It was confusing. I did not understand the questions. Searching around for all the things was hard too.
We had to write a lot
It was too easy. I wasn't challenged at all.
I don't think that there was anything I didn't like.
The boring part, the dull ones, and the lack of fun because it made you not really want to do this at all.
I did not like the investigation activity. First, it was not realistic. If Jackson Middle School band students got sick from swimming, what happened to the others. Also, the band students had more than 1 class, but there was only absences from band. Lastly, we had just finished learning about bacteria, so this was extremely boring.
1) it may be a little too easy for 7th graders 2) on the website, the key for things was small 3) finding a lot of info.
1) having to find information 2) having to do the packet 3) having to write
Some part were really easy and other parts were too hard.
1) I didn't like having to look at all 4 schools, because 2 had nothing to do with it. 2) I didn't like how it ended because I wanted to find more. 3) I wanted to go farther so I could who started it.
Some of the questions were a little hard.
There was a lot of work involved in it. I don't like work that goes on and on. It involved sicknesses. I don't like getting involved with sicknesses. There wasn't really a lot that I disliked.
1) some parts were boring. 2) It didn't involved much experiments. 3) I can't think of a third one

It was a lot of writing.
I thought it was easy, it was boring, didn't learn much and took a long time
Reading, writing and analyzing
I least liked lesson 3 because there was too much writing.
It had sometimes made no sense, I got somewhat tired of it, & it had not be very interesting.
1) The talking about good questions 2) Developing testable questions 3) The hardness of the health department investigation
Not being able to choose our groups and it was confusing a little
I did not like writing my sources and all of that things. Didn't like doing procedures.
Working too hard, not doing most of the lessons, and only learning two different things new
I didn't like how people got sick and had diarrhea. I didn't like how birds would hit a target and that's it.
Things I least enjoyed were doing a lot of writing some of the information was confusing, and some of the questions.
I did not like is that we only have to use only one computer.
I did not like doing this packet, it was boring.
The last activity was a bit difficult, the website was hard to understand and it didn't make me feel challenged.
1) I did not like the cube "experiment" because my group got disqualified 2) I did not like all the papers and writing we had to do 3) I did not like lesson # 4 because I did not understand part of it.
I didn't like it, I didn't learn anything and I thought it wasn't doing much
We had to write a lot / keep on doing the survey & wait. I wasn't too much interested in it only in the student's illness activity.
It had hard things, there was too much research and the clues too
We worked too slow, we didn't find out some things, we spent too long on certain things.
Nothing, because I like the supplement pretty well.
1) We had to work in groups (sometimes) 2) We had to complete this packet 3) We had to do a lot of surveys.
All I really didn't like was all the writing we had to do because it was long and hard and boring.
The rules that we couldn't go ahead that we couldn't peck.
Boring, hard to understand, and too many questions.
Boring, didn't learn a lot, and didn't help me learn.
I didn't like how we did the questions on the overhead. I thought that part was boring and too easy.
It went a little too fast, these surveys were too many (I like surveys, but there's too many), and I don't have a 3rd one

Filling out papers, arguing our opinions, considering things I thought were boring.
Getting on the internet using our own individual hypothesis and lesson!
Filling out worksheets, technical difficulties (finding computers and not being able to use certain things on them). The info that we didn't need.
The unnecessary information - It was not necessary, Restaurant names - they were confusing and not being able to touch things, I'm a hands on person.
The question on lesson 2, it was kind of easy.
First of all, the mystery cube, we never got to see the bottom. Second, the school website was hard to find. Third of all, the material was somewhat hard to read.
I didn't like the last activity because I found the instructions confusing. I didn't like the question activity because I found it narrow minded. I didn't like the editorial activity because I found it pointless.
I didn't like the way that the website placed their information. I didn't like all of the useless writing that we had to do and I didn't like the topic of the experiment. (Sick kids not attending school)
1) That we couldn't pick the activities we wanted, because some people might want different options. 2) That we already had a lot of information before every activity, because I like finding information myself.
A couple lessons were boring. The website was a little confusing. The testable questions.
Most of the lessons were easy and somewhat boring. The surveys were annoying since you always are filling them out. The investigation was boring because nothing was interesting.
The easiness, the deceptive sites and the site.
I didn't like all the time spent on it, making new questions and that's about it.
Not understanding what to do on the worksheets. All of the writing just for one statement. How long even the short assignments were.
Some of it was kind of boring. It was very short. The websites were, at some point, difficult to navigate.
Note taking, we had to get lots of notes and website info and letters.
The Java scripts on the site prohibiting access were somewhat annoying, but I'm sure they had a purpose. The first activity seemed a little elementary and otherwise it was great.
1) It was too easy. 2) It required a lot of writing, where students could discuss it orally just as good. 3) It was boring. Questions are an okay subject, but a whole lesson on them gets tedious after a day or two.
1) Some of them didn't seem to be relevant to science. I just didn't understand. 2) None of the lessons explained very much, it was hard to get what and why we were doing the activities. 3) Some of the lessons got too long, it made it feel like it was busy work.
It was too easy. We knew just about everything that we did. It was hard to understand what they wanted us to do sometimes.
Not knowing what I was supposed to do. Not knowing all of the rules and guidelines. Not being able to solve the problems with a good understanding.
The stuff that wasn't fun was boring because they covered on stuff that we'll never need to use.
1) was too long 2) wasn't very interesting 3) not getting to know what was on the bottom of the cube.
Working with a testable question.
The website was very frustrating it all looked the same, boring, etc. Having to write all this down drags down the "fun" in it. Reading all the editorials.
Two things that I didn't like was the testable questions. I sort of didn't like the biological box either. I can't think of the 3rd one, so I'm not going to make it up or anything.
It seemed like a topic that shouldn't be this long of a session.
I dislike how we never knew what was on the boxes. I disliked the question form.
1) The final activity wasn't fun or interesting. 2) Never knew what was on the bottom of the numbered box. 3) Couldn't touch the boxes.
It had a bad topic. It was unorganized
It was boring after awhile because it repeated a lot of information. There was too much information about all the topics. It took too long to figure it out and to put all the data together.
I do not know, I was gone for most of it.
The only thing that I didn't like was writing everything down because I'm really lazy.
It got confusing sometimes and it got boring.
It was boring x 3
1) I didn't like not knowing the answers 2) Made me think too hard 3) The website was confusing.
It was really easy most of the time.
I didn't like hearing a phony problem.
How long they took, the fact that we weren't allowed to see the answer on the mystery box and the graphs.
It wasn't very interesting. There were no actual facts we could learn.
I didn't like the working with questions lesson because it was confusing. I didn't like the pulling it all together because it made me mix up my information.
Explaining, not doing very much, how hard it was and lots of writing.
1) Statements, they weren't clear 2) Lots of writing, too much. 3) Not enough hands on activities.
It was a little confusing at the end of the website. I had trouble deciding whether it was the restaurant or the lake that made the kids sick.!
Overall, it was a good lesson.
Near the end it got pretty hard considering how much time we got.

1) All the discussions 2) The website was kind of hard to navigate. 3) Not able to be on computer more.
I wasn't very interested in the subjects, was a little too easy.
Lesson 1 seemed a little easy. I would have liked to work with something a little more interesting than a box. The website seemed hard to navigate. The lessons got a little boring sometimes.
I didn't like the beginning because it was kind of childish.
It was boring because there was too much work. It was too long. We didn't disucss enough, so I was confused.
The coming up with your own question was sort of hard.
The bug thing, I don't like bugs.
The question sheet and the worksheet were we had to write down evidence and the cubes.
Not being able to see the bottom of the cube. Answering questions and recording graphs.
Writing a whole lot.
It seemed redundant. It seemed targeted towards a younger student. It wasn't interesting.
Was hard to understand questions. Hard to find answers (where was I supposed to go on that website) and slightly boring.
I liked it all.
Making testable questions because the testable questions were hard to relate to the testable questions.
At first, I thought it was going to be confusing, and it was a tiny bit because form some things I needed more explanation. There were no other dislikes overall.
Some wasn't fun. We had to write it all down.
I didn't like Lesson 4, because it wasn't that exciting.
On some of the experiments, I didn't understand things. Some of the testable questions were hard to do. No. # 3
It was a short period of time. I would like to have done more.
The healthy thing, making questions.
There wasn't anything I disliked, I didn't love everything, but I didn't dislike anything.
1) not getting to move the cubes - it bothered me! 2) surveys 3) complexity.
I wanted to do some experiments, like growing crystal.
Time consuming because each activity took long to do, but also fun. More different experiments. Longer time to do the worksheets.
reading, writing and worksheets
Reading, investigation worksheet and surf the web.
Length, paperwork, and this survey!
The website because it was, no offense, boring. (Yet cool at the same time.)

Writing with pencil (I prefer to type) none others
I didn't really like having to use small articles to find questions out of them, some of the questions were hard to understand at first no # 3
I didn't understand why we did all the lessons.
The lesson was a little too long because towards the end, I got a little bored.
1) It was a little easy 2) I didn't get taught much 3) It seemed like the same thing on the worksheets
1) Some of the stuff was boring. 2) Some of the things took too much time. 3) Some of the things didn't interest me.
Baby stuff, Easiness and Tediousness
I did not like the length
1) It was not hard really at all. 2) Some points got very boring 3) I did not like one or two of the activities.
Some of it was not interesting and some of it was too easy.
Usage of tools (Lesson 1) , partners in Lesson 2, and extraneous information
1) The purple sheet was rather boring. 2) Nobody can argue that it was scientific, but not as scientific as some of us had hoped. 3) For awhile, I was on vacation, and I was rather confused. I eventually picked it up though.
1) The purple sheet because I wasn't there for all of it and I wasn't able to complete the whole sheet. 2) I thought the forms we had to fill out (for the computer project) were really confusing 3) The letters to the editors were fun to read but really confusing to make testable questions on.
1) Cube experiments - they were too easy. 2) Green sheet - waste of time because we did the same stuff in class and it was BUSY WORK ! 3) We never had a final answer to Truman Middle School experiment - I like having answers to testable questions.
I didn't like having to observe the cubes for a long time. I didn't like doing the activity about the letters to the editor. I didn't like discussing what we did to come up with conclusion for the Truman School children skipping classes.
1) The number die was too easy because it was like a dice. 2) Conducting a scientific investigation was a bit easy because we knew the answer after the second part. 3) Pulling it all together wasn't extremely interesting for me.
The supplement was a little bit too easy. For example, the number cube activity, the number cube was too much like a dice in a board game, so many people drew the same conclusion from it.
1) The 4th lesson was kind of boring, very long. 2) A little too easy. 3) Not very conclusive.
I didn't like the last exercise; the analyzing evident, because it was more boring than the others. That's all of what I didn't like about the whole supplement.
The boring part, the subjects & the limits
Sometimes, the rules for the activities were a little

restricting. The activities were a little time consuming.
1) I didn't like that some things don't have answers. 2) The 4th lesson wasn't really a lesson, it was too easy.
Sometimes it was not very interesting and interactive. If it has more fun, this would be a more effective if there was more fun colorful and interactive things.
1) There were similar worksheets for everything, which was too repetitive. 2) A lot of activities (e.g.. Number cube) were not very interesting. 3) The supplement was easy a lot of the time.
I didn't like not know the answer to the "Inquiring Minds" activity. I didn't like not knowing the cause of the illness in the end of the "Conducting a Scientific Investigation". I didn't like how on "Pulling it all together" we had to both write down and discuss the same things.
It was too long. Lesson 2 could have been done with just one question. The purple sheet could have been more yes and no questions.
Most of the activities were boring! The lessons weren't hands on at all. There was too much talking and not enough doing.
The box experiment
Creating "Pulling it all together" was boring, useless. Too easy, not much to learn. Making testable questions were difficult to understand and no background info self learning.
Mystery cube - needed more explanation, Lesson 2 - needed better explanation and pulling it all together, didn't need to do all that discussion / sheets.
Coming up with too many testable questions. The pulling it all together activity took too long. We were very limited w/ the cube.
On a few of the lessons, (1&4) you didn't do much, just fill in some answers to questions on a homework sheet. On # 4, there wasn't enough instructions involved, and they weren't very hands on.
I didn't like the "letters to editor" because it wasn't very challenging. There were certain things that I disliked, but overall, I really liked it all.
1) Trying to come up with testable question in lesson 2 from other questions because some of the question were really hard to figure out another testable questions from. 2) Not being able to figure out how the kids in lesson 3 actually got sick because I like having an answer to myself. 3) In lesson 4, I didn't like writing everything over again on a different piece of paper because it's just wasting time.
I did not like how some of the lessons were very easy. I did not like how the lessons we learned kept being repeated over and over. I did not like the part where we had to make a testable question from the data.
Sometimes boring, too short and homework was boring.
There were too many worksheets, it made everything more confusing. Too much writing in general.
1) Some things were redundant (need I say more). 2) There was more discussion than action. 3) Sometimes, we had boring questions to investigate.
When we used mirrors & pencils.
The writing was the only thing I didn't like.
Everything
The absences thing I think was way too long and it's kind of a drag.
What I liked least about the mirrors.
I didn't like writing so much, because that wasn't that much fun.
Inconclusive lesson, nothing else.
Nothing, except for the lessons were a little boring at times.
I didn't like it
Wasn't that hard and challenging.
The evidence, the cube thing, and the chart.
I disliked the "conducting a scientific investigation" because it was boring and I didn't find it interesting at all. I also disliked "putting it all together" because by then I was tired of the inquiry activities.
There wasn't anything that wasn't fun.
Nothing, I liked it all
Some were confusing, some I didn't really get, and some were boring.
I most of the lesson so I have nothing to say
Too much writing, too much thinking, and hard questions.
It was sometimes a little boring, It was sometimes a little hard, it was sometimes confusing…because some words were too hard to understand and we couldn't connect to the examples.
It was sometimes hard to make connections. Sometimes it was hard to related. Sometimes like in "pulling it all together" it was somewhat hard.
I didn't like the no hands on part of the box activities because I'm more of a hands on type of person. I didn't like the part when we had to read the interviews with the parents because I didn't really see any point in doing so. I though solving the absence investigation was too difficult.
Having to write out all these questions, filling out all these surveys, and that's all.
I didn't like that all of them weren't hands on.
I didn't like spending the time making questions and talking about what the reasons for the students being absent.
All the writing, making questions in lesson 3, and the testable question stuff.
I didn't dislike anything.
Nothing really because it was just a normal thing that wasn't too boring nor too interesting.
Everything
The overall thing I disliked was it got boring cause it started getting obvious
1) The feed back on everything. 2) The reflections

3) Nothing
I disliked the cube part because there wasn't much happening.
Doing the questions a lot of questions.
Saying to all the class
I only hated the notes from the Health Department because it was not interesting.
Being in a group, having to look at graphs, and nothing.
Lesson 1, Lesson 1, Lesson 1, because it wasn't cool, fun or informative
When we got the packet about the kids that got me off guard and I did not get it at all.
I disliked the distinguishing fact of working in groups. Everything else I liked.
Boring, Boring, Boring
Worksheets had to write too much, other than that I liked everything.
Working in groups because I am an independent thinker. Too little info to work with because not everything can be guessed.
The three things that I liked least about the supplement, were trying to understand the graphs, because they were very confusing, answering the questions, because my group members relied on me to answer all of them, and explaining evidence because it took a long time.
Reading maps, graphs of teams, and working in groups
Nothing, mostly.
Nothing, I loved doing it all
All the questions in lesson 2, it was easy at times, but also sometimes hard to understand.
Too much of same thing (e.g. cubes) and easy. Information got confusing sometimes (e.g. calendars) Got boring after awhile.
did like to share questions and some were hard.
The cube and the box, I didn't see the point in that lesson.
1) When Bush became president 2) When some fool shot 2 pak, and Biggy noctoreas
I didn't like how it wasn't enough challenge for kids.
Putting the pieces together - because it was like the big puzzle & I hate puzzles. Determining a testable question, it wasn't very interesting it really didn't make me think. Making hypothesis, I hate to guess because I figure out I was wrong I hate to be wrong.
1) The groups, I thought we should've picked our own groups. 2) The calendar, cause to me, they just showed dates 3) There wasn't really a third one.
The cubes because they where too easy.
Not making it so hard!
Only writing
It was sometimes boring, rather pointless, and a little confusing.
I actually mostly liked everything about these lessons.

What three thing did I like least was the lesson 4, it was kind of hard and easy.
Unorganized graphs, the assignment, and the unchallenging assignment.
How long it took, the simple questions and that some of it was boring.
It was very boring to listen to words only and read sheets.
When we had question, when we had to answer the questions.
It was easy, not interesting, not enough investigating
How boring it was
Going through all the information
The way we had only 1 handout per group, not one for every person.
Useless information, and nothing else.
1) The graph 2) The memos because they were long 3) Q & A form because it was hard to think of a good testable question.
I liked everything.
Making predictions and questions
I really liked everything so there is no least favorite thing.
1) I didn't like pulling it all together because I didn't see the point to it. 2) Also that we didn't get a sure answer for Lesson 3. 3) Sometimes, it seemed confusing.
Writing all the things down
1) Writing; I was too lazy 2) Reading; too much 3) Making sure the graph was together.
I didn't like it because the questions were too hard. I didn't like it because we didn't have enough time for the questions. It was too hard.
I only didn't like one thing and questions in the beginning it was boring.
I think that there was not one thing that I didn't like.
That we really get to experiment with something more interesting. Not having it liquid we could test. The cube was too easy.
Answering the questions they were boring.
I didn't like the information, not all but some because it was confusing and hard to figure out. I also didn't like some questions.
Writing, graphs, and interviews.
Some worksheets
We had to write a lot, thing of a lot of questions and ask questions.
The handouts weren't interesting as much, because the info, was too easy to figure out.
Writing all the evidence for the 2nd investigation.
Write all the information that was given to us.
Too long, sometimes pointless, and was sometimes confusing.
The pictures were hard to see, the table you showed after the graphs were useless, and that's it, there are no more bad things.
I didn't like when we had to write the questions,

sometimes, I couldn't understand what we had to do, one of them was boring.
The # chart, writing, and adding.
1) It was boring 2) It was too easy.
I liked it all, but some was done orally & I like experimenting better.
It was a tad bit boring, it took a long time. Move faster, not spend such a long time doing 1 thing.
1) Some was done orally. 2) Some were hard to read 3) I really liked some, but they were short lessons.
It was a little boring, and it was pretty easy.
Writing questions.
Some parts were boring, not necessary, and they had extra information.
It was sort of boring. The experiment were we had to see if it was a testable question was too easy.

Nothing else I have to say.
1) The activities weren't that fun 2) It made me think 3) The graphs were hard
Was too easy for no. 1 started to get easy for no. 3 & 4.
Didn't have a least.
Boring, not hands on and not enough time to really go through it
Boring, too easy, and a little off the subject / not really a reason why we were doing or how it helped us.
Not enough info
Lifting the biology box, reading examples, and staring at table.s

What specific suggestions would you make to the developers to improve these materials?

Carefully edit the internet programs before putting it online and make some things less confusing for us students
Make it more interesting
Look on more websites
Take calendar off web
Make a home button for the internet
Make the stories shorter and easier to understand
Nothing
I really do not know!
Make the website easier to understand
The questions
Make the website more interesting
Make easier questions and more readable charts.
Make it a little easier in general and not so much writing.
Give actual videos for the "parent" interview "videos"
Make the words easier to understand.
Have links and have buttons on website.
Nothing much, just when are we gonna get another one to do.
Pure more pictures.
Tell us what the outbreaks was at the end of the lesson.
Being able afterward to see under the cubes.
Less writing, make the question more fun and not so boring.
On the website, instead of making us click the back button a lot, just put a home button on the links.
More computers, less writing
Make it a little harder.
Keep it the same.
Need better info, don't make it so long.
Make it more interesting
None
Make it more interesting
Make them more fun.
To give an actual answer
Do a different problem! Make it harder and have more evidence.

Make it easier and don't make people do this!
Let us touch the cube to make it more fun.
Give us more time and information and it would be a ton better.
Nothing
Keep it exactly the same.
Maybe change some of the testable questions.
Nothing really, it was all fine to figure out and everything came together at the end.
Make it more challenging
Maybe put some more information on the web page.
Make it more like real life and geared for kids.
More info and a little bit better with the graphs.
Less writing
Not so many questions
Nothing
Try and make it more fun or challenging
I do not have any suggestions
They should make the work a little easier
Make an answer to the computer work.
Not so many questions
I think there should be less writing.
Do not tell us the answer
Get those clips working.
None
Make it shorter and less writing.
Something more grown-up instead of a cube on a plate.
To make them more understanding.
Make the cube more difficult with higher numbers, maybe something to do with primes.
They should consider putting in an online journal so we can record things as we go.
Maybe it should just be a little bit more exciting.
Make them harder
Real lessons with info and I bet it would make it more fun
Putting it all together
Improving the website and data and graphs.

To find out the exact reason for the absences.
Nothing really.
None, it was fun
I would suggest that you tell whoever makes the textbooks to make them as fun as the website!
Make it harder, challenging and have better stories to tell.
Make it a little harder in the inquiring minds cube activities.
Try something different than the graphs.
Leave them
Nothing, it was good.
Nothing, it al was pretty good, they don't need to change it. It was a good learning experience.
Make the graphs a little more understandable
Make the work more fun
Make the experiments fun.
To be able to find the answer, new graphs and tables.
Back button make things like click here to see cart.
Make it fun
Make the reading easier
Get rid of the mystery cube and use another like the Biological box.
I would suggest different questions for the testable question activity.
Tell how the children got sick and throw some fun into it.
More activity
None, it was perfect.
Actually, have videos from the parents when they say they do.
Make it a little more fun.
No testable questions
I think there should be less concentration on explaining evidence.
Next time, make a video
Nothing, because I think it was just fine.
Maybe some upgrades on the computer website but other than that nothing.
Make a link from the beginning to the school website.
No charts!
Don't make us write so much. Make science easier.
Try to make them a little more fun.
Make graphs a little easier to read.
If we got to use materials or experiments
Make the computer lab days longer
Make concern us
Less writing
Nothing
Nothing
Cut down on what you are teaching, kids don't need to be crammed with stuff to figure out a scientific question.
Don't have any.
Make the program a little easier to understand.
Make the questions more understandable.
Before you put something out to whomever have it done and the graphs needed more time.
More info.
Add a fourth piece showing what the researcher wants to see to finish and understand what the exact absence cause was.
Nothing
Nothing
Put more info and tell what the sickness is or at least let them figure it out by doctor's reviews.
More internet

Make more useful information
Better information
Use something with computers more
Give more info online
Not really anything in particular.
Make the question part easier.
Nothing really, be there for the 1st day of it.
Make the assignment a little shorter.
Add more activities
More explanations in the lesson.
Make it easier to understand
make the web page less confusing
Give the answers….Please
to make it interesting.
Make it a little more amusing and nothing else.
Reduce the number of senseless worksheets
Have more info on the website
Make it fanner
Make it more fun.
I think it is perfect and should stay the same except have better instructions.
Have some answers
The activity should continue on until we find out the entire solution and not stop in a break and leave us wondering.
More time
Make it more realistic and better.
Not so many projects
More details and more activities!
I don't know
Make it more interesting tell us t the end what they really got sick from (even if you make it up)
Nothing, the projects were fine and make a variety in questions instead of the same ones over and over.
Have fanner projects and longer projects.
Make it a little bit harder
Give us more, like testing water for bacteria and stuff
Make it more involved and give the answer to see if they really got the right one.
Tell what kind of bacteria was in the water.
Make it more interesting
Have more resources and maybe have like a video cam to look at when you doing the investigation so you can "interact" w/people who got sick.
Make the cubes a little harder
Have more websites that we could look at.
I think you should make the lessons a little bit bigger and longer so it takes awhile to solve.
Try to make the part were they showed the people going to the different places more clear because I got confused.
I wouldn't
Don't ever make something like this ever again.
Make it more fun
Less confusing & that's all
Come up with answers think of more things to get more science liking persons interested.
get school some money to buy some new computers
Hands on things not so much in papers and computer
You could make it a more interesting topic. It would have had more data so it would be easier to figure out.
you should make the lessons harder
Give us the answers at the end to see if we were right or not…please.
I don't know

More information on website
I don't know
Be more clear when asking questions & giving information. Pick different topics sometimes.
Nothing at all, all was just right.
Make it a lot more challenging but make the information understandable.
Shorter health investigation
Make the work sheet different
nothing really
Make it fun
Put more stuff on the site.
Make a more difficult and interesting option for those of us who despise things that are too easy.
More physical things to do
Don't know
Give more information, make things a little clearer.
Make your materials more challenging. Add in surprising twists or something of the sort.
Make it more exciting & not have to just sit more.
More lessons
Make it shorter & have less writing
Get rid of the cubes they're too easy
Could you make the questions on the health worksheets just a little more self explanatory?
That they should not have so many worksheets. That they should not have so much extra info that is unnecessary.
The topics should be on things that involve hands on experiments, not just graphs & lists.
I don't know
I don't know, it was pretty good.
Make the notes more readable. Date more organized and the table for students more spaced out.
Give out more info!
Get rid of the boxes!!!
Don't have any suggestions.
Put a mid-level cube in between the two we used, their difficulty went from extremely easy to extremely hard.
Less worksheets and writing, maybe type the papers or some of them.
Make it more interesting but don't make it harder.
More fun and a little more interesting.
Nothing, it was good.
more supplement
Maybe instead of a dialogue box that pops up saying " access denied" a box for a password would be more realistic
Make it more fun & interesting to kids
Nothing at all
Give us more time to work.
More time
Give us information to actually find the answer.
Have more video clips to make it more exciting.
Nothing more
Do some more website things. They were so fun.
I think they should keep it like it is.
Change the rules, don't make us share computers finish the whole website.
Make it more fun. It was boring.
Don't get into it
Make the website a little more interesting.
I think lesson 4 was boring.
Not to be so long

Make Lesson 4 easier.
Give better explanations how to do the work. Also make Lesson 4 easier.
I love marine animals and reading about that would be fun. A little less reading and making up questions and more working in groups.
They don't need a lot of work, but it needs some.
Let students do outside activities.
They need to take out the testable questions.
I think you need to put more activity in the book.
To make them a little easy from now on.
Don't use too many big work so we can't read.
Make sure that some student can understand what you trying to say. Give more details.
I think they could make the lesson on the computer easier and clearer than what it already is.
To improve lesson 4 with easier questions.
Take out Lesson 4
There is nothing I would change nothing
I don't really know because it was good.
There wasn't anything that needed improvement. I liked that it was great the way it is.
Less reading
Use more materials to help understand the subjects better.
Show more evidence that involves surveying someone face to face. Also there needs to be more tests involving doing research with the people or things that it involves.
I think that the materials should be tested more often.
More computer work
Make it more exciting and fun.
I think it should be a little more fun.
Put all the information not so close together. This will probably make it harder and much more fun, by making it more interesting.
Make it more fun.
Their good like they are
They could use more hands on lessons.
Do more fun activities
Keep the same activity because I think they are fun. Give materials to help solve the problems (questions).
I would say to do a project that is fun and not boring. No offense, something that would be more interesting.
I would change all those papers to one so you can see all your evidence at one time.
I didn't like the groups. Change Lesson 2. I didn't like some of the examples in Lesson 2, you should do this as a curriculum.
I would take out the homework. I would keep everything else the same.
To improve the materials you should give us 1 more day for the supplement. I would take out lesson #2 because the people in my group along with myself thought it was bad. My science class is short, so you should extend the activity.
I would make more homework than what we had.
The specific suggestions that I would make to improve these materials is work with a bigger group maybe go on different websites.
I would leave the materials just as they are and not change a thing.
Nothing, I think everything was good and should not change.
I think we should get the answers o the lessons it should be a little bit harder and we should get to have more time on

the computers so we can have time to analyze my data and have no homework for all the lessons and I would want to pick my own partner next time.
Don't just throw this away, this is fun. You won't want to fall asleep.
I would change it to bigger groups. I would give a little easier homework.
I would say that they should make more sections on the websites. Other than that, I don't think there's anything to be changed.
The only improvement I would say is to not give a lot of homework out. Or if you know something is wrong with food or water is to don't let them eat it or let them swim in the water. Other than that I wouldn't change a thing.
Actually, I think that they don't need to improve any of the lessons. I think that they were interesting. I only think that maybe one or two weren't interesting.
Make easier questions for the kids and information.
Make the site easier to read.
I would have made it a little more challenging in some parts of the areas.
I think they should have given us a lot more information. More people should have gone to one place.
They should give you a little bit more information and to give us the answers at the end of all the lessons.
I think we should have worked independently and should have found out what the answers were when we were done.
I don't have any suggestions except I liked it.
I don't have any specific suggestions on these lessons.
I don't have any suggestions.
Let us on the computer the whole time to do our work.
I think that the way they should improve it is the way of all of the reading. Also, all of the writing that we had to do.
I would tell them that they should have changed the box thing and have the water tested on that website.
I would like to see some more hands on kinds of things and more things to do w/ the computers. Lesson # 2 could be much better and the ending could be much interesting. Also, please tell us the answer to Lesson # 3.
Well, to improve these materials, we can do like good experiments and write up an essay.
I don't have any suggestions except to give us more time. I need time to think and work. They should tell us the answer at the end too.
I think for the lesson 4, we should be given more time to complete the investigation. For the Biology cube, you should make the pictures more clear as to what they mean. Everything else was great.
I think that the testable questions lesson should have been more exciting than it is right now. I also believe that we should know what the answer to the investigation. Even if it was never really solved, at least we would know.
I would suggest that at the very end to put what was the cause and sickness.
You could add another memo to tell us if we were right about the things we suspected. You could of told us what the illness was.
I would make that I think there should be another day with finding out the cause of the illness and it should tell what the cause was.
Make it so you can find out the cause and the bottom of the cubes too.
What I would suggest is to make the writing assignments more interesting and be able to know how the investigation ended up.
I would not make any changes at all because overall I like the whole experiment.
Tell us what was on the bottom of the boxes and what was the source of the sickness. Have people who want to work in groups in groups and people who don't be alone.
I would say that they should do something else than besides graphs. Some people aren't all that good at reading graphs.
You can make it a little harder and a little more interesting.
I would say tell them what happened to the kids and loose the box activity.
I believe that the developers should add another day with more evidence so we can solve the mystery. We should also be allowed to access all of the data in the order we want. Some of the directions could be cleared up as well.
I would suggest to them they should make the biology box more interesting and they should give the results at the end!!
I would suggest you make it more interesting and easy to follow. I would also suggest that you give the answer at the end.
One suggestion; redo Lesson 2. It made me want to go to sleep. It was boring! If you take out or change Lesson 2, you have a great curriculum.
I would continue on so to make it longer.
I cannot think of anything but to work on it longer.
I couldn't think of any comments to write down.
I couldn't think of anything to make it better.
I cannot think of anything that the developers could do to improve these materials.
I think we should do more with the lab tops.
I can't think of anything.
Can't think of anything.
Give a little more information.
I can't think of anything to suggest.
I would like them to make the investigation a little more harder.
I hated parent's saying they vomit, choke and dark urine.
I think that the boxes were boring and if you could at all make that part a little more interesting that would be great. Then, it would be the perfect lesson's in the world.
I can't think of one.
You should tell us the answer at the end.
Tell what happened to the kids, how they caught it and where?
They should make the lessons aimed more toward kids my age.
Less reading and more charts.
I had a good time and can't think of how it should be approved.
I would make the lessons number 2 and it should be fixed somehow but I don't know.
I think that the whole process was fun and the only thing I would say is we need less writing.
I think that it was mostly good other than that the mystery cube, lesson 2 and lesson 4. You should fix it.
I had a lot of fun. Lesson 2 could be improved, but I don't have any suggestions to help.
Make less writing. Make Lesson 4's questions clearer.
Make less writing and let us know what's wrong with the kids.

I think the developers should make the whole thing a lot longer because it was so interesting and I didn't want to stop working on it.
I liked the whole thing so I don't think there needs to be any changes.
The improvements could be maybe to give the answer to the cause of the sickness in Lesson 3.
Don't change it, it's great
I just had such a good time, I can't think of anything.
I had a good time but I don't know how it can be improved.
I think Lesson 4 needs to be improved.
None, because I liked it so much.
Tell what things are / the answer to change the way student's investigate.
I would suggest that you explain the questions more and be more specific about what you are asking.
Give me more evidence on the Health Department Investigation.
I would suggest that the developers have less writing to do because not many people like to write that much.
Make them more suitable for kids.
I would try to make the questions easier to understand.
I would put more hands on experiments in each investigation to add something interesting to the experiments.
If you could please make more fun activities not a lot of homework, and if we could know what the illness and the number of the cube was.
I think the developers should take a few (maybe 1 or 2) of the testable questions off the form.
Add pictures of the students and have them talk about their illness.
I don't have any suggestions, it was a pretty good unit.
This activity overall was very fun. The only thing that I would change is to add more activities like the mystery cubes.
Make Lesson 2 less complicated.
I think you should make it harder.
Make lessons 2, 4 more fun! (Experiments)
Not be so loud when we talk and having the cubes in a clear box we could not touch it.
Make use: Think outside the box, ask questions, infer, and share more ideas. Thanks for your time.
Make different levels for people who have a different learning way.
make it more hands on
Give more information, be able to touch the box and less worksheets.
I would make it not so confusing (internet)
I don't know
Make it harder for people to figure it out. If it's too easy then, it's not fun.
I think that the website was a little hard to understand on how to get the graphs.
Make it a little fun!
Do more fun things.
I would say not to make us write so much and make it more fun.
To make some parts easier and some parts harder.
Make just one page w/ everything so you don't have to keep switching from video clips to attendance to maps.
Stay the same
You could not put sicknesses in the experiment that goes on and on.
Les us do more hands on experiments. The internet thing was interesting, but all we did was read.
Make it more fun, make it more harder, do stimulations - hands on and make it not just about scientific inquiry
I don't understand
Make more hands on activities like actual experiments.
We should make lessons more exciting than just doing investigation.
I would make it a little more hands on in some parts.
To let the students choose their partners!
I would say that you could do more activities and less work (I hated the work).
I would improve to develop these materials by asking where that person went and who they were with. I would also ask to stay away from people who are sick.
I would tell the developers to make some of the information easier to understand.
Make it better by improving it.
To make the stuff on a better topic than kids getting sick.
I think you should work on your website and improve upon the fun.
Make the lessons more fun!!!
Re read the question just in case, so you'll understand it a little better.
More hands on
Make it more fun.
Make it a little more fun mysterious something that can make curious something good too
Got at a faster pace, le kids find out what's at the bottom of the number cube.
To fit some things wrong with the graph on the computer.
Make it a little more interesting. Add more experiments to get the kids to participate more in the activity.
I think it needs less writing and more things that kids like. For example, sports and clothes could be used.
Make it fun and interesting
More fun activities and make it more interesting.
Not so much writing
Don't give us so many surveys! You overdid it! Give us a little more time.
Use more appropriate levels of activities, based on your findings. Many people thought the material was boring and it seemed either way below or slightly above them. This is an interesting study, it seems however.
Change lesson 2 a bit.
Give us more specific information and don't give us stuff we don't need.
Make better questions. Come up w/ better names on the website.
Make the school a little more realistic.
Make the site more user friendly. Other than that, they did an excellent job.
Clearer more precise instructions and activities that actually matter.
Work towards a more interesting topic like a sport or something. Also, make a better website with easy instructions and diagrams.
Don't give us so much information before the lessons.
Make the website more manageable also make the lessons a little more fun.
Make the whole unit harder and more interesting with less surveys!

Make it a bit more interesting.
Make it a little less time consuming.
Use more charts and try to shorten it up.
Make it last for a longer period of time. Make the websites easier to gather information from.
Don't give it to 8th graders. It was too simple, for me (I can't speak for the rest of them). It would help if you made it more interactive and hands on. There's less chance people won't fall asleep.
Have the developers explain the activities better. If you don't understand why you're doing it, hard to follow along and be into the activities.
Make a little harder and more challenging.
Give better to understand instructions of what you're wanting us to do.
Don't make everything so lengthy. I was done with activity 4 a full day ahead of schedule.
Make it more interesting for Middle School and fix the website.
Make the website more bigger / better. Don't make all the other people fill these out.
One thing I would say is that they should do more with the testable questions. It wasn't all that interesting.
Not as repetitive. More hands on stuff.
Make it more hands on group experiments.
Make it interesting.
You should have less information so that it's a little tougher than it was. Other than that, it was fun and a cool way to do science.
I have nothing to say on that.
I thought it was interesting and I have no suggestions.
I really don't have any. Maybe make more group activities.
Shorten the material.
I think they are just fine.
I would suggest that the activities are more challenging and more interesting.
Maybe next time use an actual problem that had happened before.
More interesting lessons that take less time.
Add more loop holes and dead ends in the last one to make us think more.
The topic wasn't as interesting to me, as I thought it would be. It would be more interesting if it was more hands on.
Make it a little easier
Make clearer statements.
Keep up the good work.
Make the most of the questions like the first few.
Make it harder.
Change the subjects that we had. (Such as the Children's Illnesses).
They should try to find more things that kids would be more interested in. They should make the website easier to navigate.
Don't do it again
None, I can think of, besides do it according to age.
Make it shorter.
I'd say keep it the same.
More activities, hands on!
It was a bit childish.
Integrating technology.
Try to challenge the student's more.
Shorten the lesson! Don't make it so lengthy!
It is fun, except for the website name.

Make the questions easier to relate to.
Get new ideas, it was kind of boring.
Give longer time on computers.
I don't have any suggestions.
Make them more exciting and fun, like Lesson 3.
They did a very good job.
No suggestions whatsoever.
Change agree a little and disagree a little to different words.
Nothing with health
I would just tell them that writing is not that fun thing to do and that they should come up with a better way for the students to write down info without having to write a whole lot. Example-more things on computers so we could type?
To make the website procedure easier.
Make it more fun, more like fun things like growing crystals.
Make different experiments.
Shorten the internet one
A different problem
Shorter, sweeter and more to the point.
Nothing, they were pretty good, but make the website more exciting.
Make it a typing assignment
On the second one make the articles bigger / longer.
It was hard to follow the class plan sometimes. Website should be easier to navigate through. It was fun, sincerely,
Though I understood it, some of the information on the website for lesson 3 was hard to find.
You could shorten it up a little. Keep making it interesting. Include more fun things that make you think.
Make it harder and try to mix it up a little, maybe.
Make the projects more interesting.
Implement more difficult and age-appropriate learning material.
Make the work a bit harder, and make the writing a little more fun.
Take away extraneous information and make things more clearer especially Lesson 4
Telling us what was on the bottom of the boxes. What was the cause of the illness. Make it more challenging.
Nothing, I thought it was a great idea to start this, and made Science even more fun that it already is.
Spend more time on each subject to make sure we have the idea that you were teaching us.
The only suggestion that I have is that Lesson 2 is a little more fun. Parts of it just kind of dragged on.
I would make them harder.
Make the videos for the interviews about student's illnesses able to be viewed. Change the school websites so the information is either available or so the links that don't work are no longer present.
Some activities (I listed them earlier in the evaluation) were too easy. I suggest making the number cube different from a die. Make another real hearing or distracting piece of evidence for the conducting a scientific survey. Is there a more fun way to do the Pulling it all together?
They should make the activities more hands on to involve more hands on learners. Make the activities more challenging because some of them were way too easy.
1) Make the 4th lesson shorter. 2) Give us enough evidence to draw conclusions. I only have two.
You could make more fun activities including going outside.
Give more examples in materials….

Make the websites wider.
Perhaps in Lesson 3, you could include more of the false paths, for example, in the restaurant inspections, there were two restaurants that didn't appear later on the activity. I think that some people started developing theories off of the restaurants. If you included those restaurants in later activities, perhaps there would be a bigger range of theories.
Have more activities!!
All I would suggest is to make it more interactive. You could do this by making the websites bigger and the worksheets more entertaining.
Try to make the worksheets more interesting. Try to make the worksheets differ from each other. Try to make the worksheets harder.
I would suggest to add a part to the website activity to compare student's theories about the illness to the real cause.
Shorten it and more of it on computers.
Make the lessons more hands on it's more fun that way. Make the lesson have more activities to do and reduce the talking.
The box experiment
Make more difficult overall, teach more about testable questions and more testable question activities.
More explanation for using tools, space for hypothesis, lesson 4 shorter and more hands on.
Working on the website was the most fun, so maybe more activities like that.
Make some of the lessons more hands on Lesson # 1 & # 3 were interesting because they were hands on.
For the first activity, try to add another activity that you can ask multiple testable questions of. Try to make lesson 2 and 4 a little more interesting. Make lesson 1 harder.
I would have liked a lot of these lessons better if they were more challenging and less repetitive. I also did not like how it was so scheduled that we did not have time to discuss what we learned.
Extend it, please!
More talk (the class as a group) it would make it more fun and easier for us to learn.
Make some more interesting questions that we can relate to and make more activities where we get to get up and do something (like experiments! Real Ones!)
Just to think about what we like and try to incorporate it in the study.
maybe give chemical experiments.
I think this was a good lesson and suggestion would be that I would be more better if you change the theme such as sports, but stick with the same subject. If you guys add more "fun" activities this will be something you learned and have fun at the same time.
Have something new each day so that we don't have to investigate the same thing each day, and maybe make the problems more interesting like a murder case or something. It's kind of boring though.
Make it more difficult and challenging.
To make it less boring in to be more creative, and graphics.
Make the chart / graphs easier to read. Make it more fun.
Should I make these lessons longer and harder, way too easy for even 6th grade.
On the front page to change the words "Some other race" and then state Hispanic. Overall, the project was cool.

Make it harder or at lease grade level.
Make the lessons a little more interactive and fun, and a little more grade level.
Make it fun and experimental.
Make it harder.
This is fun, make a group of 6
I have no suggestions.
More fun activities.
None, just more interesting topics.
More different activities besides group work.
It could be more challenging. Most of the lessons were easy for me. (May it is the fact I take a high school science course, I don't know)
Make it harder but it still needs to be fun.
I liked it all I will not like to change anything from it
You might want to make it a little easier or make it fun.
Using more visuals and color. More understandable words, easier, connectable examples.
Nothing, everything was good.
None, it was real fun.
Nothing, it was just right.
Try to make it more fun to do.
Maybe to make the site better.
That some of the charts on the website that showed what students were absent, confused some of us, so that can be improved!
Most stuff should be oral and not having to fill out all these surveys.
I would say to make more problems that you solve on the computer.
Make it more interesting and maybe add more to the website.
Make it easier to understand
Make it more interesting and more active things.
It's great as it is.
Make it more challenging and interesting and fun.
Make it more challenging investigate something more interesting and convince this program.
I would say just to keep it the way it is.
Everything is cool!!!
Maybe for the investigation give less clues and make the clues hard to find so it would be a little like a scavenger hunt.
Keep the computer involved.
Make the inquiring minds lesson more interesting.
Nothing, everything was good.
In Science, I could do more, like see for example the cube.
It was really fun and took a lot of …..
Have better and harder questions.
Don't lie keep it real.
Just find something besides cubes to start this supplement.
Maybe give more information on the absents, and more on the mystery cube and biological box.
The kids being absent I did not get and it was hard.
I would like if you researchers would just take a breather, you work too hard, then make us do projects and essays, please.
Make it less dull!
I don't know
Nothing, it was all really good.
Keep it all real.
To improve the materials, I would tell researchers to make the graphs that they supply us with less confusing, and

making shorter questions.
Try explaining graphs more easily and don't just list the teams list all grades and how many people were in school.
Make it more fun with games, more graphs, and less writing.
Maybe give more evidence. For this, I don't mean to be rude.
Get rid of the cube.
Take out lesson 2, make lesson 3 longer and more fun.
I would suggest to make topic more interesting and fun to do. Other areas; astronomy, physics, geology.
Less questions, more cubes, more information and more fun.
Make more interesting questions.
Make it a bit more fun, and don't make it so frustrating and hard.
Add more ninjas in the story and make O.J. innocent.
Have more challenge for kids.
Not to drag out the investigation & include useless info. Basically, they can make it just a little less tedious.
More objects.
It should be harder because it was too easy.
Make the materials more fun and interesting.
If we could do real life experiments.
I would make easier questions and some hard and see how much you know.
Organize graphs, make it intellectually challenging, and make the assignments more fun.
Make it a little more interesting, maybe or colored papers so we don't get hypnotized.
Make copies of information for the whole group.
Make games and more activities to make it more interesting for the users.
Have more hands on stuff with color
Make it a bit more interesting.
Make the investigation harder and more fun.
Somehow make it more fun.
I would reread this unit and try to make testable question.
Be more specific and write formidable questions.
There should be an exact answer and you should tell the kids when they decide what they think. We should know for sure.
Overall, your project was really good, keep up the good work.

Make the beginning interesting and fun so people would like it and get info it more.
I wouldn't make any suggestions because I think it very good.
Just mainly more interesting. Only one of them really was.
To have more hands on stuff so we could learn and get messy.
Add more map and charts. They add a new challenge to the info, they already reserved.
Improve and make data easier add more activities (like cube thing) instead of just giving data and discussing.
That the information be a little easier.
Make it more interesting.
Make this more challenging.
More interesting testable questions. You're doing a great job!!
This inquiry "Project" should I say was one the coolest projects I have ever done. It was fun, easy etc…I speak for all my fellow peers when I say this.
Give better testable questions.
Not so confusing.
It's fine they way it is
Let us actually test what we were trying to figure out.
Make it a topic that's more interesting to kids.
Make it more fun.
Nothing, I don't know
Make it more interesting make it harder, more complex.
I liked the Biological Box more than the Mystery Cube because the box had habitats.
More experiments, not just worksheets.
Make it more fun.
Make it more fun.
Make it more fun.
Give us more time and let us do it independently.
I don't have anything to say except for it was fun and thanks.
Only students are allowed to talk and figure things out while teacher sits at desk and says nothing.
Make it on subjects kids would relate to
More info
Make it more interactive.

Pretest and Posttest Student Results

Results of the Pretest and Posttest Evaluation

The evaluation consists primarily of examination of the differences between the students' Pretest and Posttest scores on a "Student Knowledge Survey". The answer categories were True, False, or Not Sure. Appendix D contains copies of these surveys. The students took the first Knowledge Survey (the Pretest) before exposure to the materials and the Posttest after using the materials. There were 19 questions on each test. Additionally, analysis of the "Not Sure" responses was conducted as well as the teachers' estimates of the success in achieving learning outcomes.

T-Tests.

The students' answers were scored with answer keys which yielded the number of correct items. The Not Sure responses were scored as incorrect in the initial analyses. The mean number of correct responses on the Pretest = 11.23 (out of 19, Std. Dev. = 3.07). The mean number of correct responses on the Posttest = 13.52 (out of 19, Std. Dev. = 3.21). The t-test for Pretest and Posttest scores was $t=18.03$, $df=597$, $p < .001$ (two-tailed).

Percent Correct.

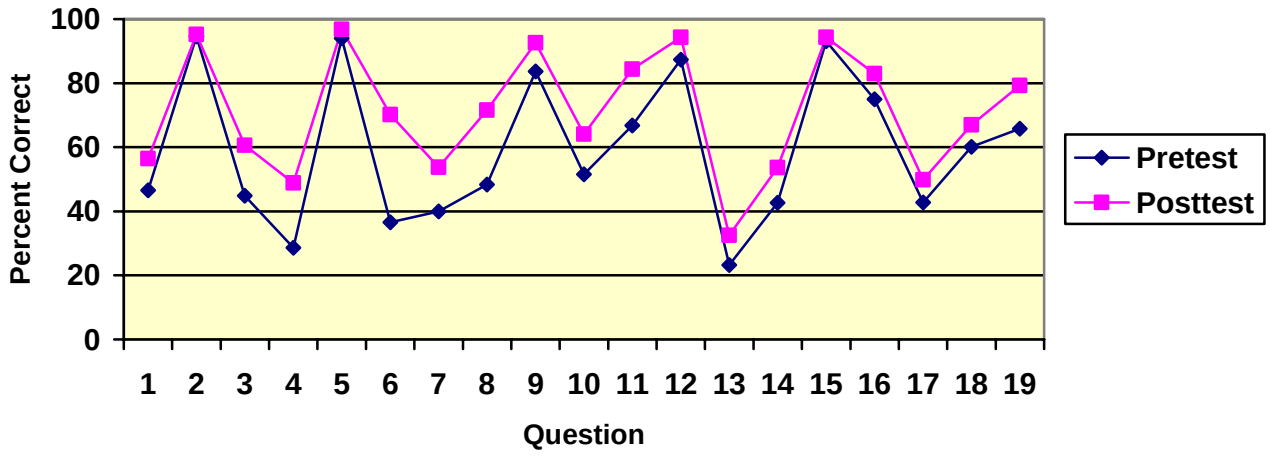
Table 43 shows the percent correct on the pretest and posttest as well as the percent of "not sure" responses.

Table 43. Pretest & Posttest Questions with Percent Correct & "Not Sure" Responses.

	Percent Correct PRETEST (SKS1)	Percent Correct POSTTEST (SKS2)	Percent "Not Sure" Responses on PRETEST	Percent "Not Sure" RESPONSES on POSTTEST
1. All questions can be answered through the process of scientific inquiry. (false)	46.6	56.4	32.3	9.2
2. Different questions require different types of investigations. (true)	94.6	95.2	2.8	1.5
3. Evidence used to support a scientific explanation can include personal opinions and beliefs. (false)	44.9	60.6	17.3	7.8
4. A scientific investigation must include experimentation. (false)	28.6	48.9	15.9	10.8
5. The results of a scientific investigation may lead to asking new questions. (true)	94.0	96.8	3.8	1.1
6. The following is a testable question: Why do some foods taste better than others? (false)	36.6	70.2	24.8	7.0
7. All questions about the natural world are testable questions. (false)	40.0	53.7	27.6	18.2
8. Testable questions relate to scientific ideas rather than personal opinions or beliefs. (true)	48.4	71.6	28.1	10.7
9. Some testable questions can be answered through investigations that involve making observations. (true)	83.6	92.6	12.1	3.2
10. Testable questions cannot be answered using the results of surveys. (false)	51.5	64.1	23.4	13.0
11. The following is a testable question: Why is football better than soccer? (false)	66.8	84.3	16.1	5.6
12. Scientists may ask different testable questions about the same problem. (true)	87.3	94.3	8.7	3.2
13. A testable question cannot be answered by using just one type of evidence. (false)	23.2	32.5	23.8	12.0
14. Evidence from experiments is better than evidence from observations. (false)	42.7	53.6	29.2	21.4
15. A scientific investigation may lead to asking more questions. (true)	93.1	94.3	4.9	3.1

16. Scientific investigations always produce a single explanation. (false)	75.0	83.0	17.4	8.6
17. Some testable questions can be answered without collecting evidence. (false)	42.8	49.9	24.2	14.7
18. Different types of evidence collected to answer a testable question always lead to the same explanation. (false)	60.1	67.0	25.6	13.4
19. Scientific inquiry involves considering alternative explanations. (true)	65.8	79.3	29.5	14.3

Table 44. Another Depiction of Pretest & Posttest Percent Correct



"Not Sure" Responses.

In addition to the analysis of the True-False answers on the Pretest and Posttest Knowledge Surveys, there is a “Not Sure” category of response. This response was offered on the survey because it essentially is a non-threatening option for students to choose when they in fact don’t know what the answer is. This is entirely possible for many students because they had not yet covered the material. Correct answers are probably the result of their own reading, good guessing, or luck. We wanted to establish that it was OK to say they did not know the material rather than to guess. Table 45 clearly shows that the number of "not sure" responses were reduced on the posttest. Guessing or uncertainty seems to have been diminished substantially by using the module.

Table 45. The Reduction in Not Sure Responses from Pretest to Posttest

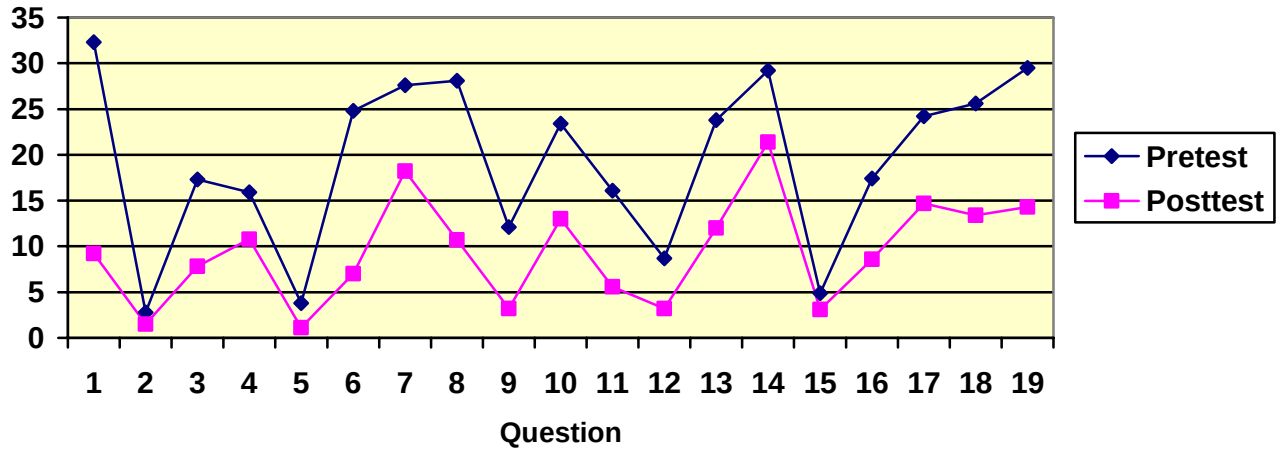


Table 46. t-Test Results for All Pretest-Posttest Questions

	Percent Correct PRETEST (SKS1)	Percent Correct POSTTEST (SKS2)	Degrees of Freedom	t-value & p value
1. All questions can be answered through the process of scientific inquiry. (false)	46.6	56.4	661	4.66**
2. Different questions require different types of investigations. (true)	94.6	95.2	663	.27
3. Evidence used to support a scientific explanation can include personal opinions and beliefs. (false)	44.9	60.6	658	8.35**
4. A scientific investigation must include experimentation. (false)	28.6	48.9	663	9.33**
5. The results of a scientific investigation may lead to asking new questions. (true)	94.0	96.8	660	2.90*
6. The following is a testable question: Why do some foods taste better than others? (false)	36.6	70.2	661	15.14**
7. All questions about the natural world are testable questions. (false)	40.0	53.7	658	5.90**
8. Testable questions relate to scientific ideas rather than personal opinions or beliefs. (true)	48.4	71.6	660	9.97**
9. Some testable questions can be answered through investigations that involve making observations. (true)	83.6	92.6	659	5.68**
10. Testable questions cannot be answered using the results of surveys. (false)	51.5	64.1	653	4.99**
11. The following is a testable question: Why is football better than soccer? (false)	66.8	84.3	660	8.67**
12. Scientists may ask different testable questions about the same problem. (true)	87.3	94.3	660	4.56**
13. A testable question cannot be answered by using just one type of evidence. (false)	23.2	32.5	641	4.40**
14. Evidence from experiments is better than evidence from observations. (false)	42.7	53.6	641	5.14**
15. A scientific investigation may lead to asking more questions. (true)	93.1	94.3	637	1.15
16. Scientific investigations always produce a single explanation. (false)	75.0	83.0	639	4.12**
17. Some testable questions can be answered without collecting evidence. (false)	42.8	49.9	637	3.29**
18. Different types of evidence collected to answer a testable question always lead to the same explanation. (false)	60.1	67.0	639	3.63**
19. Scientific inquiry involves considering alternative explanations. (true)	65.8	79.3	641	6.68**

*=p<.05 and **=p<.001

Table 47. Number of Student Scoring Higher, Lower, or the Same on the Pretest and Posttest.

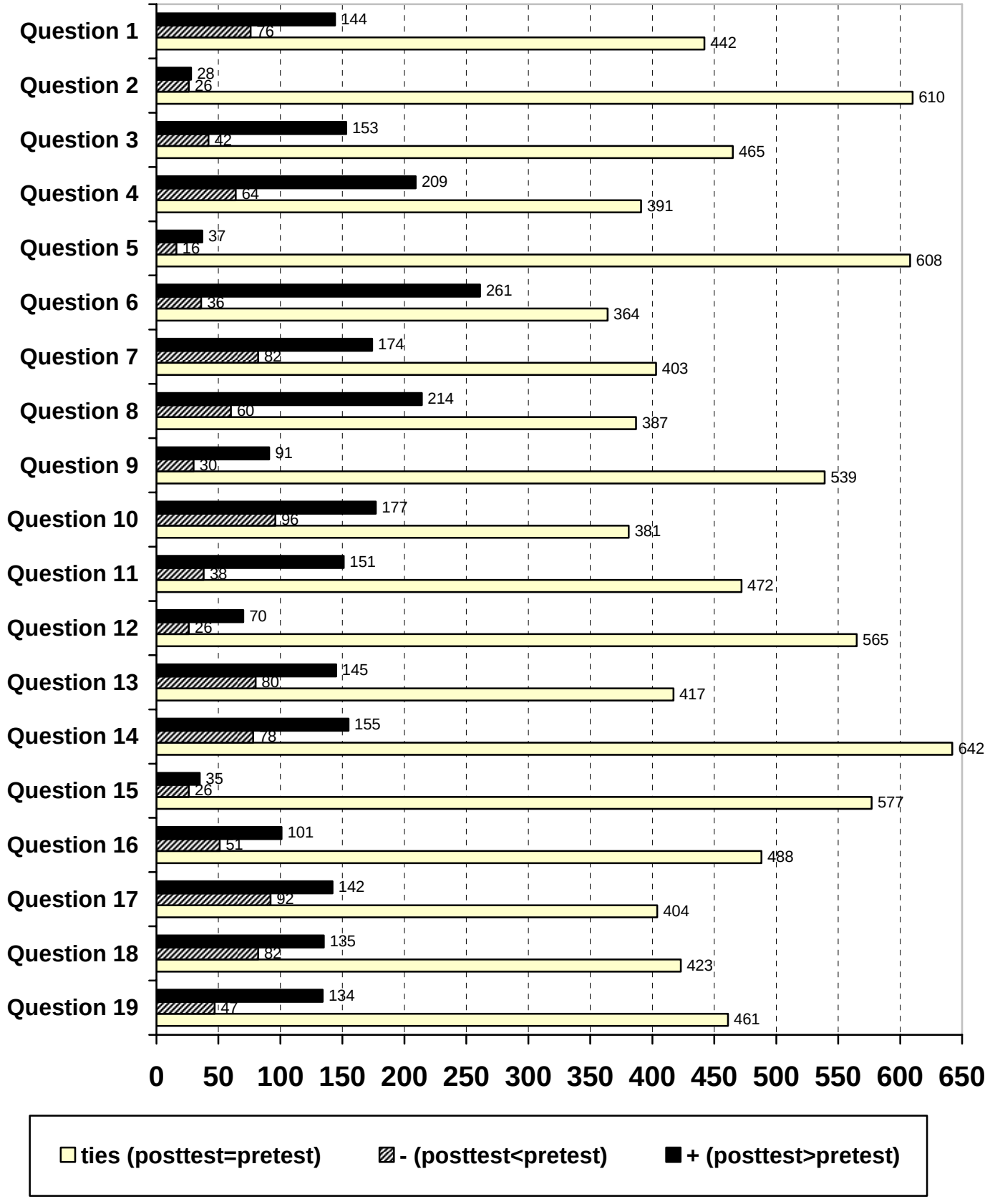


Table 47 is a graphic representation of the changes in scores by question. The solid black bars represent those students who had an incorrect or “not sure” response on the pretest but on the posttest answered with a correct response. The striped bars represent those students whose scores changed from a correct answer to either an incorrect or “not sure” answer in the posttest. The clear bars represent those students whose answer did not change. This means that if it was incorrect, correct or “not sure” on the pretest, it remained the same on the posttest.

Correlation.

It is also useful in conceptualizing the relationship between pretest and posttest scores to view them as correlates. Essentially, this view is that the higher a score on the pretest, the higher the score on the posttest, or what is termed a "positive correlation". Since the variables are interval level measures a Pearson's r correlation coefficient was calculated.

The Pearson's r for the pretest and posttest scores = .513, p<.001. This is a statistically significant correlation. Essentially, this means that when you take the square of the .513 figure to obtain r^2 you get the amount of variance in the posttest scores which is explained by the pretest scores. **This r^2 = .26 or 26 percent of the variance in the posttest scores is explained by the preexisting level of knowledge which was measured by the pretest scores.** It can be assumed that the remaining variance in the posttest scores (that is, most of it) is explained by other factors, such as exposure to the instructional materials and teaching the students have received.

Teacher Estimation of Achieving Learning Outcomes.

The pretest and posttest scores are the primary method of determining the results of the evaluation. Another input for this evaluation is the judgments of the teachers on how effective the lessons and the overall module were in achieving the learning outcomes. Table 48 gives the distribution of responses from the teachers. The scale is 1= Strongly Disagree, 2=Disagree, 3=Disagree a Little, 4=Agree a Little, 5=Agree, 6=Strongly Agree.

The questions the teachers were answering were related to whether they agreed or disagreed that the lessons were effective in achieving the specific lesson learning outcomes. The table clearly shows that the teacher judgments fell predominantly in the Agree to Strongly Agree range on these statements. The lowest score was in Lesson 1: Outcome 3. This score, however, is still in the Agree range. The highest score was on Lesson 3: Outcomes 2 and 3.

Table 48. Teachers Judgments on Achieving Learning Outcomes.

Learning Outcomes	Mean (Scale = 1-6)	Standard Deviation
Lesson 1 Learning Outcomes		
1. Students should recognize that science uses a process as a means of learning about the natural world.	4.67	1.12
2. Students should be able to identify the major components of the process by which scientists learn about the world.	4.78	1.09
3. Students should have an appreciation for technology that helps scientists collect data, improve accuracy, and analyze results of investigations	4.44	1.13
Lesson 2 Learning Outcomes		
1. Students should be able to ask questions that can be answered through investigations	4.78	.44
2. Students should be able to formulate their own scientific questions and identify the type of evidence needed to answer them.	4.56	.53
Lesson 3 Learning Outcomes		
1. Students should be able to formulate testable questions and conduct an investigation.	5.11	.60
2. Students should be able to use graphs and data tables to analyze and interpret data.	5.56	.73
3. Students should be able to develop explanations and predictions based on evidence.	5.56	.53
Lesson 4 Learning Outcomes		
1. Students should be able to identify a testable question.	5.22	.83
2. Students should be able to describe the evidence needed to answer the question.	5.33	1.0
3. Students should be able to assess whether or not evidence is adequate to answer the question.	5.11	.93
4. Students should be able to evaluate alternative explanations.	5.22	.67

Field Test Site Comparisons.

In analyzing the data it is also useful to break down differences between sampled units. Sites were selected to be in the field test because they differed in terms of geographic region and racial and ethnic composition of the student body. The primary sites received a field test orientation and the secondary sites did not. The t-tests reported are paired comparisons. Table 49 contains the results of these analyses.

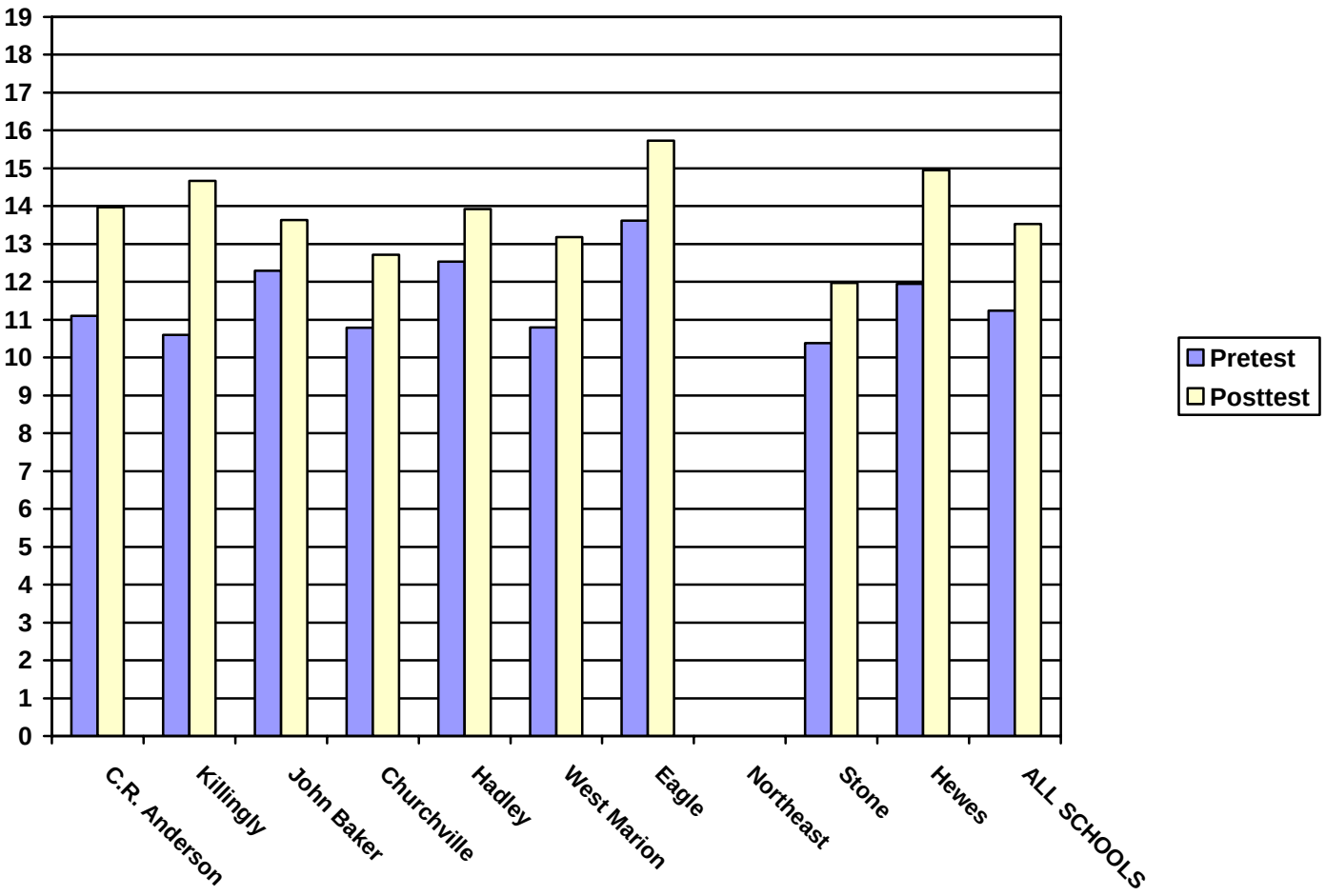
Table 49. Comparisons Between Field Test Sites on Pretest and Posttest results.

Field Test Site	Primary or Secondary Site	SKS1 (Pretest) (Range =0-19)	SKS2 (Posttest) (Range =0-19)	df	t-value
C.R. Anderson Middle School	Primary	11.10	13.97	98	7.50**
Killingly Intermediate School	Primary	10.60	14.68	86	13.55**
John Baker Middle School	Primary	12.29	13.63	40	3.15*
Churchville Middle School	Primary	10.79	12.72	91	6.66**
Hadley Middle School	Primary	12.53	13.92	63	4.55**
West Marion Jr. High School	Primary	10.80	13.18	43	4.44**
Eagle School of Madison	Primary	13.62	15.73	36	4.78**
Northeast Middle School	Primary	N/A	N/A	N/A	N/A
Stone Academy	Secondary	10.38	11.97	115	6.34**
Hewes Middle School	Secondary	11.95	14.35	19	3.74*
ALL SCHOOLS COMBINED		11.24	13.53	599	18.13**

*=p<.01
**=p<.001

Another way of visualizing the results when comparing the schools is depicted in Table 50. This table shows the results of the pretest for each primary school along with its posttest results.

Table 50. Another Depiction of Pretest and Posttest Scores for Primary and Secondary Site Schools



Discussion of Results

Field Test Demographics.

There inevitably is a conflict between the need for representative samples and the demands of the real world to identify and access willing teachers and students. In field tests, it is logical to identify teachers who are willing, capable, and have the laboratory resources to conduct the tests even though their classes might not yield representative samples. The goal of the evaluation is to test and evaluate new curriculum materials. What better set of subjects to test than those who can use it and articulate its advantages and disadvantages?

The primary field test sites were fairly diverse. They varied in urban-suburban-rural and racial/ethnic composition. Geographically, most areas were represented with the exception of the southwest. The secondary sites was "opportunistic" in nature, that is, they were included because they applied, not because they helped establish "inclusiveness" in any way.

Evaluation Results from Students.

Utility of Student Results for Developers.

In general the results in Tables 6 to 9 are most useful to the developers to obtain the overall impressions of the students on the different areas of evaluation. The percentage results on all lessons are more dispersed and have more disagreement than the teachers' answers for similar questions. It is suggested that the developers review the separate tables for each lesson and focus on those with the most dispersed and lowest average scores to find room for improvement. For example, Lesson 3: *Conducting a Scientific Investigation* was perceived as the most difficult lesson by teachers and students and Lesson 1: *Inquiring Minds* was the least difficult. Surprisingly, the overall module difficulty rating by students (4.88) was higher than any of the individual lesson difficulty ratings, yet still below the “Just Right” level, indicating that overall, the materials are at or near the right difficulty level for the age group. Reading the comments by the students on these lessons should reveal why they thought this way and give clues to remedies for the materials. Each lesson has a table on the text-based question responses on the lesson difficulty. In addition, lesson 3 has questions pertaining to the website activities. Comparing the same average of responses to questions across the lessons will give developers an idea of how well the different lessons were evaluated by the students. Evaluation Snapshots in Tables 6-9 also give a quick and brief summary of the lessons and may be a useful starting point.

Comments from Students.

After each of the teacher and student Lesson sections are comments from the students. These include what student’s liked most and least about each lesson. The Most Valuable Aspects of the Module included items such as the web activities, the mystery boxes, and figuring out sickness. The Least Valuable Aspects of the Module included items such as the too much reading, too easy (and too hard), not knowing the bottom of the cube and not knowing the sickness. In the Overall questions, students were asked what suggestions they would make to developers to change the materials. Comments in this section were geared towards, more hands on experiments and multimedia experiences (web, video, etc.). These items are only a sample of the many comments made by students. The developers should review the comments in each section to see the diversity and number of comments and to identify possible areas for change. Additionally, the evaluation snapshots provide a beginning point to understanding the results.

Lesson and Overall Module Difficulty for Students. The results on the level of difficulty judgments by students suggests that even though they are all close to or a little below the *just right* mark that lesson 1 was perceived as the least difficult and lessons 3 was perceived to be the most difficult.

Evaluation Results from Teachers.

Utility of Teacher Results for Developers.

Even a brief perusal of the results depicted in the teacher results tables clearly shows that the results from the teachers are less dispersed and focused more in the *agree* range. Again, the task for the developers in examining these tables is to focus on the low scores and most dispersed sets of responses to statements. In so doing, they should identify likely candidates for modifications and improvements in the materials.

Comments from Teachers.

After each of the tables in the chapter sections are comments from the teachers pertaining to that particular lesson (1-4). In the "Overall" results section developers will find comments relating to the overall effectiveness of the materials as well as suggestions for revisions. The Most Valuable Aspects of the Module included items such as working together, the web, and the high level of inquiry. Least Valuable Aspects of the Module included items such as parts of lesson 4 and problems for students with learning disabilities. Suggestions for improvements included items such as extending investigation sections, make less repetitive, and more web links. These items are only a sample of the comments made by teachers. The developers should review the comments in each section to identify candidate areas for changes. The evaluation snapshots contain a brief overview of the lesson and teacher results and are a good place to start.

Comparison of Teacher Ratings on Lessons.

The Snapshot tables contain the results of calculating the averages for the various sets of questions on the different evaluation dimensions. Most of the results are in the *agree* range on these items. However, the developer can identify strong and weak areas of lessons by comparing the lessons to each other, much as the teachers and students did. For instance, both teachers and students rated lesson 3 as the most difficult. It should be noted however, that most of the difficulty score averages from the teachers were near or below the "just right" score of 5 as were those of the students. Teachers often perceive difficulty higher for students than students perceive difficulty for themselves.

Teacher Background Materials.

Questions relating to the teacher background materials can be found in Table 61, with comments relating to the background materials immediately afterward. The teacher background materials scored very high, and there were no complaints about them.

Pretest and Posttest Evaluation Results.

The Pretest and Posttest evaluation consists of examination of the differences between the student's scores on a "Student Knowledge Survey". The items were statements which the students could indicate True, False, or Not Sure. Appendix D contains a copy of the pretest and posttest (Student Knowledge Surveys 1 & 2). The students took Student Knowledge Survey 1 (the pretest) before exposure to the materials and Student Knowledge Survey 2 (the posttest) after using the materials. Additionally, analysis of the "Not Sure" responses was conducted as well as the teacher's estimates of the success in achieving learning outcomes. Table 43 contains the student knowledge questions and the percentage of correct responses on the pretest and posttest as well as the reduction of "Not Sure" responses. Tables 44 and 45 are graphic depictions of the pretest and posttest scores. All questions showed an increase in student knowledge from pretest to posttest.

The results were uniformly positive. Use of the materials yielded statistically significant increases in knowledge as measured by the student knowledge surveys. Additionally, the teacher estimates of effectiveness in achieving learning outcomes were all in the agree range. The "Not Sure" responses were substantially reduced on the posttest indicating more comfort, familiarity, and correct information from the students.

Conclusions and Recommendations

A. Conclusions

Analysis of the *Doing Science: the Process of Scientific Inquiry* Module clearly shows that the module has been very well crafted and most of the modifications will be of a fine-tuning nature not an overhaul. The

comments in the lesson sections should be examined by the developers and compared with the results of the site visits by staff in order to obtain most likely areas for improvement to the module.

The evaluation results suggest that the module was very effective overall and yielded statistically significant changes in scores from pretest to posttest results as well as high judgments by teachers of the effectiveness in achieving learning outcomes. However, there are a few areas that might be identified through pre-posttest results and teacher and student comments which need to be clarified and/or expanded. In particular, in the lesson 3 teacher comments there are a number of suggestions regarding what did and did not work as well as suggestions from the teachers on how the lesson could be changed. Lesson four seemed to yield a number of comments from teachers in the "overall" improvement section.

B. General Comments Regarding the Doing Science Module

Lesson Improvements. A reading of this report and the will yield many insights for the developers in ways to improve the materials; of particular interest will be teacher and student comments as well as pre and posttest results. It is clear, however, that the module was successful.

Access by Persons with Disabilities (PWDs). It is recommended that we create curriculum materials, in all their various forms, in ways that allows access by persons with disabilities (PWDs). One of the populations of American society which will benefit greatly from technological advances in computers, CD-ROMs, DVDs, websites and internet access in general are persons with disabilities. The Americans with Disabilities Act (ADA) was passed in 1993 and sets standards and mechanisms for access for PWDs. The Department of Education has a number of agencies working to improve access by PWDs such as the National Institute on Disability and Rehabilitation Research (NIDRR). Also, Congress passed the Workforce Investment Act in 1998 which mandates changes in software and peripheral devices to allow access by PWDs. This Act includes the Rehabilitation Act Amendments of 1998. This Act mandates, in section 508, that when Federal agencies develop, procure, maintain, or use electronic technology, that they ensure it is accessible to PWDs.

We should consider enabling access to our curriculum materials by PWDs and including the cost and time of doing so in our proposals. The modifications are somewhat different for different types of disabilities and often depend on unique technology which the PWD has at their location (such as software on their computer which enlarges text for visually impaired persons). The software for websites can be written in such a fashion as to enable the use of the different input and output devices used by PWDs. Usually, websites are not so constructed. The nonprofit Center for Applied Special Technology (CAST) has procedures to follow to do this and subsequently receive their "Bobby-Approved" status. This approval indicates to the disabled community that certain standards have been met and they will likely have no trouble accessing the site <www.cast.org>. These types of innovations in our curriculum materials, whether stand alone, such as a CD-ROM, or installed and accessible at our website, would make the materials available to a much wider audience.

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Appendix A: Teacher Instructions

NIH6 Curriculum Supplement on Doing Science: The Process of Scientific Inquiry

Survey Instructions for the Field Test Teachers

Four surveys:
Student Knowledge Survey 1(Pretest)
Student Knowledge Survey 2 (Posttest)
Student Materials Survey
Teacher Materials Survey

Student Knowledge Surveys 1 & 2 (1 Pretest & 1 Posttest) these may be copied single or double sided.
Please administer Student Knowledge Survey 1 (Pretest) prior to teaching any of the materials.
Please administer Student Knowledge Survey 2 (Posttest) after teaching all of the materials.

Student Materials Survey: Give the Student Survey to your students after they have completed the materials. We suggest that you display an overhead or write on the board descriptions of each lesson to help students remember the lesson. Please feel free to copy these surveys single or double sided.

Teacher Materials Survey: Please complete your survey on the lessons after you complete each lesson. We have bound your survey for ease of use.

Comments: Please feel free to make any comments you wish. Your comments are not reported as attributable to you. They are coded and compiled with other comments in order to identify patterns of comments. The more critical input we get at this stage in the development of the materials, the better the final product will be.

Note on Student Survey Identification Numbers: The *Student Knowledge Surveys* and the *Student Materials Survey* call for the first letter of the last name and the last for digits of the Social Security Number as an identification number for each student. This method does not use the entire SSN. This is the only method approved by the NSF, Department of Education, and the National Institutes of Health as a way of identifying people for research purposes (e.g., linking pretests and posttests) which **guarantees** privacy. This technique has been approved by Institutional Review Boards (IRBs) at major research Universities across the country. Students should have SSNs and should know and use them. A less desirable method **(because it does not guarantee privacy)** can be used if a student does not know or cannot remember their SSN. A student may use portions of their Student ID number (not the number itself) or the last 4 digits of their phone number. It is critical that the number be the same for each survey the student fills out. Please ensure that students know that they must use the same number each time they fill out a survey. For background on this to provide to students or parents, consult the websites on the handout given at the Field Test Orientation.

If you have any questions regarding the evaluation portion of the field test please contact either Ted Lamb tlamb@bscs.org or Molly McGarrigle mmcgarrigle@bscs.org (719) 531-5550

Thanks for testing our materials. Field Tests are absolutely essential to developing high quality curriculum materials. Your assistance is greatly appreciated!

Appendix B: Teacher Survey

Teacher Materials Survey

Doing Science: The Process of Scientific Inquiry

Instructions: Please complete this brief survey **AFTER** you use the supplement materials. This survey will help BSCS improve the quality of these instructional and teacher support materials. Thanks!

1. Name _____ 2. School _____

3. Information about the classes that used the instructional materials:

CLASS	NAME OF CLASS	GRADE LEVEL	NUMBER OF STUDENTS	TYPE OF CLASS (Reg,AP,Honors)	INSTRUCTIONAL SETTING (lab, reg classrm, # of Teachers, aides)
1					
2					
3					
4					
5					

4. Approximate gender composition of all classes:
Male _____%
Female_____%

5. Approximate race/ethnicity composition for all classes: (Note: Categories used by U.S. Census Bureau and reported to the funding agency to assure inclusion of all groups in the study):

Asian_____ %
African American_____%
American Indian or Alaska Native_____%
White_____%
Native Hawaiian or Other Pacific Islander_____%
Some other race/ethnicity (e.g., Hispanic or Latino/Latina)_____%
Two or more races_____%

Lesson 1: *Inquiring Minds* In this lesson, students used the Mystery Cube and the Biological Box to model aspects of scientific inquiry.

Please rate the materials on the items below.

A. GENERAL QUESTIONS ON LESSON 1: *Inquiring Minds*

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson contained an appropriate amount of content.	1	2	3	4	5	6
2. The lesson promoted thinking, inquiry, and study skills.	1	2	3	4	5	6
3. The lesson was engaging (that is, it got students more interested in the science content).	1	2	3	4	5	6
4. The lesson took an inquiry-oriented approach.	1	2	3	4	5	6

Comments:

B. EFFECTIVENESS OF LESSON 1: *Inquiring Minds*
MATERIALS IN ACHIEVING LEARNING OUTCOMES

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. Students should recognize that science uses a process as a means of learning about the natural world.	1	2	3	4	5	6
2. Students should be able to identify the major components of the process by which scientists learn about the world.	1	2	3	4	5	6
3. Students should have an appreciation for technology that helps scientists collect data, improve accuracy, and analyze results of investigations.	1	2	3	4	5	6

Comments:

C. EFFECTIVENESS OF LESSON 1: *Inquiring Minds*

	Very Ineffective	Ineffective	Moderately Ineffective	Moderately Effective	Effective	Very Effective
1. Overall, Lesson 1: *Inquiring Minds* was	1	2	3	4	5	6

Comments:

D. The overall <u>difficulty level of Lesson 1 for students</u> was (circle a number):

|_____|
1 2 3 4 5 6 7 8 9
Extremely Easy — Just Right — Extremely Hard

E. The overall <u>difficulty level of Lesson 1 for you</u> was (i.e., amount of preparation, delivery, etc.):

|_____|
1 2 3 4 5 6 7 8 9
Extremely Easy — Just Right — Extremely Hard

F. Other comments on Lesson 1:

G. Total number of class periods used for Lesson 1:_____

Lesson 2: *Working with Questions* This lesson introduced students to aspects of questions that make them testable.

Please rate the materials on the items below.

A. GENERAL QUESTIONS ON LESSON 2: *Working with Questions*

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson contained an appropriate amount of content.	1	2	3	4	5	6
2. The lesson promoted thinking, inquiry, and study skills.	1	2	3	4	5	6
3. The lesson was engaging (that is, it got students more interested in the science content).	1	2	3	4	5	6
4. The lesson took an inquiry-oriented approach.	1	2	3	4	5	6

Comments:

B. EFFECTIVENESS OF LESSON 2: *Working with Questions* MATERIALS IN ACHIEVING LEARNING OUTCOMES

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. Students should be able to ask questions that can be answered through investigations.	1	2	3	4	5	6
2. Students should be able to formulate their own scientific questions and identify the type of evidence needed to answer them.	1	2	3	4	5	6

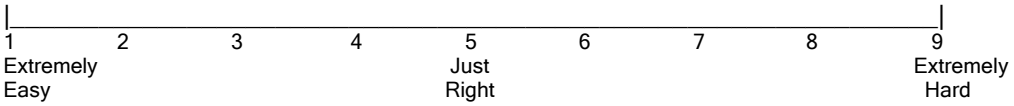
Comments:

C. OVERALL EFFECTIVENESS OF LESSON 2: *What Makes Bones Strong*

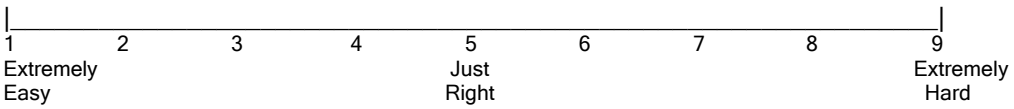
	Very Ineffective	Ineffective	Moderately Ineffective	Moderately Effective	Effective	Very Effective
1. Overall, Lesson 1: *Working with Questions* was	1	2	3	4	5	6

Comments:

D. The overall <u>difficulty level of Lesson 2 for students</u> was (circle a number):



E. The overall <u>difficulty level of Lesson 2 for you</u> was (i.e., amount of preparation, delivery, etc.):



F. Other comments on Lesson 2:

G. Total number of class periods used for Lesson 2:_____

Lesson 3: *Conducting a Scientific Investigation* In this lesson, students played the role of a community health department scientist investigating some unusual absences at a local middle school.

Please rate the materials on the items below.

A. GENERAL QUESTIONS ON LESSON 3: *Conducting a Scientific Investigation*

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson contained an appropriate amount of content.	1	2	3	4	5	6
2. The lesson promoted thinking, inquiry, and study skills.	1	2	3	4	5	6
3. The lesson was engaging (that is, it got students more interested in the science content).	1	2	3	4	5	6
4. The lesson took an inquiry-oriented approach.	1	2	3	4	5	6

Comments:

B. EFFECTIVENESS OF LESSON 3: *Conducting a Scientific Investigation*
MATERIALS IN ACHIEVING LEARNING OUTCOMES

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. Students should be able to formulate testable questions and conduct an investigation.	1	2	3	4	5	6
2. Students should be able to use graphs and data tables to analyze and interpret data.	1	2	3	4	5	6
3. Students should be able to develop explanations and predictions based on evidence.	1	2	3	4	5	6

Comments:

C. WEBSITE FOR LESSON 3: *Conducting a Scientific Investigation*

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The students were able to navigate easily through the website without confusion.	1	2	3	4	5	6
2. The website aided in comprehension of the lesson.	1	2	3	4	5	6
3. The website made the lesson interesting for students.	1	2	3	4	5	6

Comments:

D. EFFECTIVENESS OF LESSON 3: *Conducting a Scientific Investigation*

	Very Ineffective	Ineffective	Moderately Ineffective	Moderately Effective	Effective	Very Effective
1. Overall, Lesson 3: *Conducting a Scientific Investigation* was	1	2	3	4	5	6

Comments:

E. The overall <u>difficulty level of Lesson 3 for students</u> was (circle a number):

|_____|
1 2 3 4 5 6 7 8 9
Extremely Easy — Just Right — Extremely Hard

F. The overall <u>difficulty level of Lesson 3 for you</u> was (i.e., amount of preparation, delivery, etc.):

|_____|
1 2 3 4 5 6 7 8 9
Extremely Easy — Just Right — Extremely Hard

G. Other comments on Lesson 3 (use back if necessary).

H. Total number of class periods used for Lesson 3:_____

Lesson 4: *Pulling It All Together* This lesson asked students to think about their community health department investigation and relate it to the aspects of scientific inquiry they modeled during the first lesson.

Please rate the materials on the items below.

A. GENERAL QUESTIONS ON LESSON 4: *Pulling It All Together*

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson contained an appropriate amount of content.	1	2	3	4	5	6
2. The lesson promoted thinking, inquiry, and study skills.	1	2	3	4	5	6
3. The lesson was engaging (that is, it got students more interested in the science content).	1	2	3	4	5	6
4. The lesson took an inquiry-oriented approach.	1	2	3	4	5	6

Comments:

B. EFFECTIVENESS OF LESSON 4: *Pulling It All Together* MATERIALS IN ACHIEVING LEARNING OUTCOMES

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. Students should be able to identify a testable question.	1	2	3	4	5	6
2. Students should be able to describe the evidence needed to answer the question.	1	2	3	4	5	6
3. Students should be able to assess whether or not evidnce is adequate to answer the question.	1	2	3	4	5	6
4. Students should be able to evaluate alternative explanations.	1	2	3	4	5	6

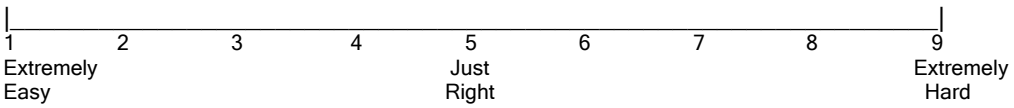
Comments:

C. EFFECTIVENESS OF LESSON 4: *Pulling it All Together*

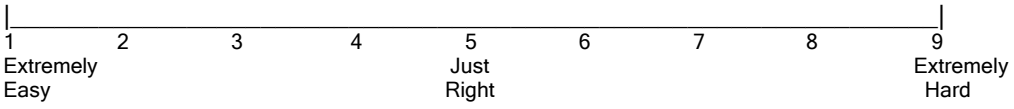
	Very Ineffective	Ineffective	Moderately Ineffective	Moderately Effective	Effective	Very Effective
1. Overall, Lesson 4: *Pulling It All Together* was	1	2	3	4	5	6

Comments:

D. The overall <u>difficulty level of Lesson 4 for students</u> was (circle a number):



E. The overall <u>difficulty level of Lesson 4 for you</u> was (i.e., amount of preparation, delivery, etc.):



F. Other comments on Lesson 4 (use back if necessary).

G. Total number of class periods used for Lesson 4: _____

GENERAL QUESTIONS ABOUT THE CURRICULUM SUPPLEMENT

Please rate the material on the items below.

A. CONTENT

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The content was a valuable addition to my curriculum.	1	2	3	4	5	6
2. The examples and explanations were appropriate for my students.	1	2	3	4	5	6
3. The amount of prerequisite knowledge required to understand the lesson was acceptable.	1	2	3	4	5	6
4. Students could understand the scientific content clearly.	1	2	3	4	5	6
5. The supplement could replace some lessons in my current curriculum.	1	2	3	4	5	6
6. The content was related to real-life examples and/or students' lives.	1	2	3	4	5	6

Comments:

B. GRAPHICS (PHOTOS, CLIP ART, ILLUSTRATIONS, TABLES, MAPS, GRAPHS, ETC.) in the Masters

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The graphics were clear and meaningful.	1	2	3	4	5	6
2. The graphics helped students understand the material.	1	2	3	4	5	6
3. The graphics promoted student thinking, discussion, problem solving, and inquiry.	1	2	3	4	5	6
4. The graphics were engaging (that is, they got students doing interesting things).	1	2	3	4	5	6

Comments:

C. WEBSITE

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The students were able to navigate easily in the website without confusion.	1	2	3	4	5	6
2. The website made the major concepts more understandable.	1	2	3	4	5	6
3. The website made the lessons more interesting.	1	2	3	4	5	6

Comments:

D. TEACHER BACKGROUND MATERIALS

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The teacher's background materials helped me understand and support the lessons.	1	2	3	4	5	6
2. The implementation materials helped me teach the activities.	1	2	3	4	5	6
3. The relationship between *NSES*'s content standards and lesson-specific concepts were clearly presented in the teacher background materials.	1	2	3	4	5	6

Comments:

E. OPEN-ENDED QUESTIONS:

1. Describe how you used the materials:

2. Other relevant information about how you used the materials:

3. What were the three most valuable aspects of the materials and why?

4. What were the three least valuable aspects of the materials and why?

5. Please provide two recommendations to improve these materials.

Thanks for your help!

Appendix C: Student Survey

Student Materials Survey

Doing Science: The Process of Scientific Inquiry

Instructions: Please complete these brief questions on each lesson in the Curriculum Supplement. This survey will help your teachers and the project developers make this a better science unit. Feel free to make comments in any section. Thanks!

Your Identification Number for the study:_____
(The 1st initial of your last name and the last 4 digits of your social security number, for example, Rosita McGillicuty, SSN=123-45-6789 would be: M6789). **OR**, whatever other identification method you and your teacher are using to identify the questionnaires and assure your anonymity and confidentiality.

Demographic Information:
(reported to the funding agency, the National Institutes of Health, to assure inclusion of all groups in the study)

1. Gender:
_____Female ____Male

2. Race/Ethnicity (check one) **(categories used by U.S. Census Bureau):**
_____Asian _____African American _____American Indian or Alaska Native _____White
_____Native Hawaiian or Other Pacific Islander _____Some other race/ethnicity (e.g., Hispanic or Latino/Latina)
_____Two or more races

3. What is your grade level in school?

_____6th _____7th _____8th

4. Are you on the free lunch or reduced lunch program?

_____Yes _____No

Please circle a number to indicate your level of agreement with these statements.

	Strongly Disagree	Strongly Disagree	Disagree a Little	Agree a Little	Agree	Agree
4. I am interested in science, in general.	1	2	3	4	5	6
5. I am very interested in Biology.	1	2	3	4	5	6
6. I am good at science, in general.	1	2	3	4	5	6

Comments on any of the above:

Lesson 1: *Inquiring Minds* In this lesson, you used the Mystery Cube and the Biological Box to model aspects of scientific inquiry.

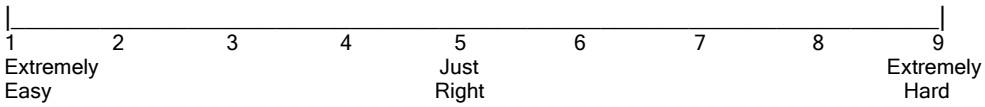
A. THE STUDENT MATERIALS

Please rate the materials you used on the items below. Circle a number.

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson was interesting.	1	2	3	4	5	6
2. I could read the material easily.	1	2	3	4	5	6
3. I could understand the examples and explanations.	1	2	3	4	5	6
4. The lesson made me think about new things and questions.	1	2	3	4	5	6
5. I could understand the scientific information easily.	1	2	3	4	5	6

Comments on any of the above:

A. The difficulty level of Lesson 1 *Inquiring Minds* was: (circle a number)



B. What did you like most about this lesson?

C. What did you like least about this lesson?

Lesson 2: *Working With Questions* This lesson introduced you to aspects of questions that make them testable.

A. THE STUDENT MATERIALS

Please rate the materials you used on the items below. Circle a number.

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson was interesting.	1	2	3	4	5	6
2. I could read the material easily.	1	2	3	4	5	6
3. I could understand the examples and explanations.	1	2	3	4	5	6
4. The lesson made me think about new things and questions.	1	2	3	4	5	6
5. I could understand the scientific information easily.	1	2	3	4	5	6

Comments on any of the above:

A. The difficulty level of Lesson 2: *Working With Questions* was: (circle a number)

|_____|

1 2 3 4 5 6 7 8 9

Extremely Easy — Just Right — Extremely Hard

B. What did you like most about this lesson?

C. What did you like least about this lesson?

Lesson 3: *Conducting a Scientific Investigation* In this lesson, you played the role of a community health department scientist investigating some unusual absences at a local middle school.

A. THE STUDENT MATERIALS

Please rate the materials you used on the items below. Circle a number.

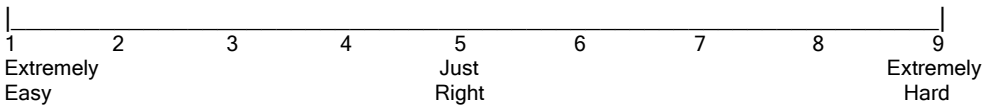
	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson was interesting.	1	2	3	4	5	6
2. I could read the material easily.	1	2	3	4	5	6
3. I could understand the examples and explanations.	1	2	3	4	5	6
4. The lesson made me think about new things and questions.	1	2	3	4	5	6
5. I could understand the scientific information easily.	1	2	3	4	5	6

B. WEBSITE

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. I was able to navigate easily in the website without confusion.	1	2	3	4	5	6
2. The website helped me understand how to conduct scientific investigations.	1	2	3	4	5	6
3. The website made the lesson more interesting	1	2	3	4	5	6

Comments on any of the above:

C. The difficulty level of Lesson 3: *Conducting Scientific Investigations* was: **(circle a number)**



D. What did you like most about this lesson?

E. What did you like least about this lesson?

Lesson 4: *Pulling It All Together* This lesson asked you to think about your community health department investigation and relate it to the aspects of scientific inquiry you modeled during the first lesson.

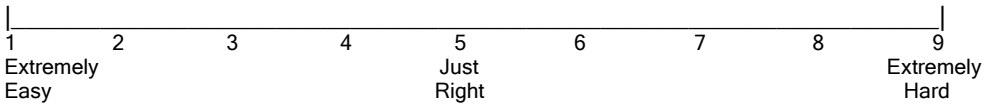
A. THE STUDENT MATERIALS

Please rate the materials you used on the items below. Circle a number.

	Strongly Disagree	Disagree	Disagree a Little	Agree a Little	Agree	Strongly Agree
1. The lesson was interesting.	1	2	3	4	5	6
2. I could read the material easily.	1	2	3	4	5	6
3. I could understand the examples and explanations.	1	2	3	4	5	6
4. The lesson made me think about new things and questions.	1	2	3	4	5	6
5. I could understand the scientific information easily.	1	2	3	4	5	6

Comments on any of the above:

B. The difficulty level of Lesson 4: *Pull It All Together* was: (circle a number)

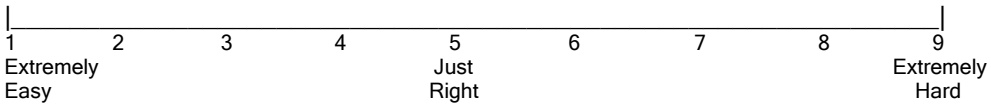


C. What did you like most about this lesson?

D. What did you like least about this lesson?

Please complete these OVERALL questions about the supplement .

Overall, the difficulty level of the Lessons and activities was: (circle a number)



Overall, what three things did you like most about the supplement and why?

Overall, what three things did you like least about the supplement and why?

What specific suggestions would you make to the developers to improve these materials?

Thanks for your help!

Appendix D: Student Knowledge Surveys

Student Knowledge SURVEY #1

Doing Science: The Process of Scientific Inquiry

Your indentification number: _____ (The first initial of your last name and the last 4 digits of your social security number (for example, Rodita McGillicuty, SSN - 123 45 6789 would be M6789).

Circle the correct answer.

1. All questions can be answered through the process of scientific inquiry.	True	False	Not Sure
2. Different questions require different types of investigations.	True	False	Not Sure
3. Evidence used to support a scientific explanation can include personal opinions and beliefs.	True	False	Not Sure
4. A scientific investigation must include experimentation.	True	False	Not Sure
5. The results of a scientific investigation may lead to asking new questions.	True	False	Not Sure
6. The following is a testable question: "Why do some foods taste better than others?"	True	False	Not Sure
7. All questions about the natural world are testable questions.	True	False	Not Sure
8. Testable questions relate to scientific ideas rather than personal opinions or beliefs.	True	False	Not Sure
9. Some testable questions can be answered through investigations that involve making observations.	True	False	Not Sure
10. Testable questions cannot be answered using the results of surveys.	True	False	Not Sure
11. The following is a testable question: "Why is football better than soccer?"	True	False	Not Sure
12. Scientists may ask different testable questions about the same problem.	True	False	Not Sure

13. A testable question cannot be answered by using just one type of evidence.	True	False	Not Sure
14. Evidence from experiments is better than evidence from observations.	True	False	Not Sure
15. A scientific investigation may lead to asking more questions.	True	False	Not Sure
16. Scientific investigations always produce a single explanation.	True	False	Not Sure
17. Some testable questions can be answered without collecting evidence.	True	False	Not Sure
18. Different types of evidence collected to answer a testable question always lead to the same explanation.	True	False	Not Sure
19. Scientific inquiry involves considering alternative explanations.	True	False	Not Sure

Student Knowledge SURVEY #2

Doing Science: The Process of Scientific Inquiry

Your indentification number: _____ (The first initial of your last name and the last 4 digits of your social security number (for example, Rodita McGillicuty, SSN - 123 45 6789 would be M6789).

Circle the correct answer.

1. All questions can be answered through the process of scientific inquiry.	True	False	Not Sure
2. Different questions require different types of investigations.	True	False	Not Sure
3. Evidence used to support a scientific explanation can include personal opinions and beliefs.	True	False	Not Sure
4. A scientific investigation must include experimentation.	True	False	Not Sure
5. The results of a scientific investigation may lead to asking new questions.	True	False	Not Sure
6. The following is a testable question: "Why do some foods taste better than others?"	True	False	Not Sure
7. All questions about the natural world are testable questions.	True	False	Not Sure
8. Testable questions relate to scientific ideas rather than personal opinions or beliefs.	True	False	Not Sure
9. Some testable questions can be answered through investigations that involve making observations.	True	False	Not Sure
10. Testable questions cannot be answered using the results of surveys.	True	False	Not Sure
11. The following is a testable question: "Why is football better than soccer?"	True	False	Not Sure
12. Scientists may ask different testable questions about the same problem.	True	False	Not Sure

13. A testable question cannot be answered by using just one type of evidence.	True	False	Not Sure
14. Evidence from experiments is better than evidence from observations.	True	False	Not Sure
15. A scientific investigation may lead to asking more questions.	True	False	Not Sure
16. Scientific investigations always produce a single explanation.	True	False	Not Sure
17. Some testable questions can be answered without collecting evidence.	True	False	Not Sure
18. Different types of evidence collected to answer a testable question always lead to the same explanation.	True	False	Not Sure
19. Scientific inquiry involves considering alternative explanations.	True	False	Not Sure